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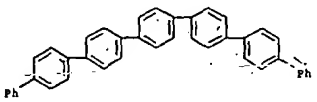
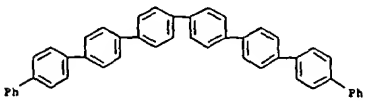
L12 ANSWER 54 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1993:233177 CAPLUS
DOCUMENT NUMBER: 118:233177
TITLE: Eigenvalue distributions and asymptotic lines of the energy in alternant hydrocarbons
AUTHOR(S): Hall, G. G.; Arimoto, S.
CORPORATE SOURCE: Shell Cent. Math. Educ., Univ. Nottingham, Nottingham, NG7 2RD, UK
SOURCE: International Journal of Quantum Chemistry (1993), 45(3), 303-28
CODEN: IJQCB2; ISSN: 0020-7608
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The bands of orbital energies for several polymeric species of alternant hydrocarbon are calcd. From these, the densities of states are graphed. By integration over the bands, the slope of the asymptotic line for the energy is calcd. and compared with the energies of members of the same series calcd. directly. For some series, the second, const. term in the asymptotic line can also be calcd. theor. and compared with that derived from the mol. energies. The results for some related series indicate that for long mols. the no. of Kekule structures does not influence the major term in the energy. The extension of the argument to two-dimensional arrays of hexagons is indicated and some results reported.
IT 70352-20-4 70352-21-5 147188-63-4
147188-64-5
RL: PRP (Properties)
(total .pi. energy of)
RN 70352-20-4 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Septiphenyl (9CI) (CA INDEX NAME)

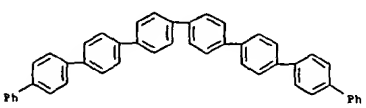


RN 70352-21-5 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Octiphenyl (9CI) (CA INDEX NAME)



RN 147188-63-4 CAPLUS
CN 1,1' 4',1''-4'',1''' 4''',1'''' 4'''',1''''':4''''',1''''''' 4''''''',1'''''

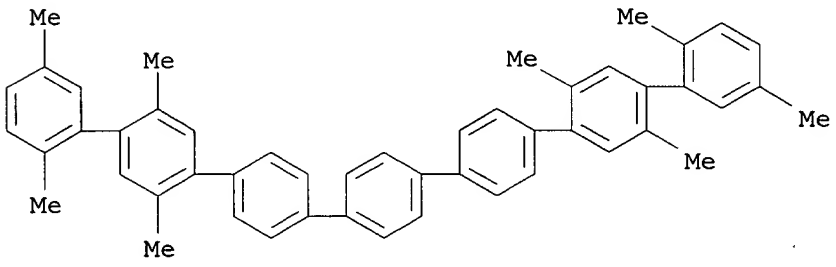
L12 ANSWER 55 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER 1992 490948 CAPLUS
DOCUMENT NUMBER 117 90948
TITLE Synthesis and characterization of phenylene linear oligomers
AUTHOR(S) Faid, K.; Siove, A.; Chevrot, C.; Riou, M. T.; Froyer, G.
CORPORATE SOURCE Lab. Rech. Macromol., Univ. Paris-Nord, Villetaneuse, 93430, Fr.
SOURCE Journal de Chimie Physique et de Physico-Chimie Biologique (1992), 89(5), 1305-11
CODEN JCPBAN; ISSN 0021-7689
DOCUMENT TYPE Journal
LANGUAGE French
AB Electrochem. coupling of monohalo-terminated bi-, ter-, and quaterphenyls in AcNMe2 contg. bipyridinenickel dibromide provided the dimers in 18-49% yield. The products were characterized from IR spectra. The electrochem. behaviors of p-sexiphenyl and its monomer (4-bromo-p-terphenyl) were compared
IT 70352-21-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, by electrochem. coupling of bromoquaterphenyl, in presence of nickel catalyst)
RN 70352-21-5 CAPLUS
CN 1,1' 4',1'' 4'',1''' 4''',1'''' 4'''',1''''' 4''''',1'''''' 4''''''',1''''''' ''-Octiphenyl (9CI) (CA INDEX NAME)



L12 ANSWER 67 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1978:152138 CAPLUS
DOCUMENT NUMBER: 88:152138
TITLE: Synthesis of alkylated p-polyphenylenes. II. Methyl and hexyl substituted derivatives
AUTHOR(S): Kovyrzina, K. A.; Tsvetkova, T. A.
CORPORATE SOURCE: Sukhum. Fiz.-Tekh. Inst., Sukhumi, USSR
SOURCE: Zhurnal Organicheskoi Khimii (1977), 13(11), 2395-8
CODEN: ZORKAE; ISSN: 0514-7492
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB P-polyphenylenes I [n = 3, R = H, R1 = Me or Me2CH (II); n = 4, R = 2,5-Me2C6H3, R1 = Me], III, IV, 41,44-dihexyl-p-quaterphenyl, and 41,45-dihexyl-p-quinquiphenyl were prepd. by condensation of appropriate iodine compds. E.g., 41,42-diiodo-p-terphenyl with 2-iodocymene in the presence of powd. Cu and Hg gave 25.0% II.

IT **66252-70-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 66252-70-8 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Septiphenyl, 2,2',2''''',2'''''',5,5',5''''',5''''''-octamethyl- (9CI) (CA INDEX NAME)



Ar = ph

n = 5

$R_1 + R_2 = (Ar)_n - R_3$

$Ar = ph$, $R_4 = CH_3$

m = 1

$R_3 = H$

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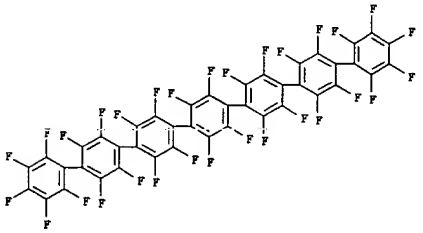
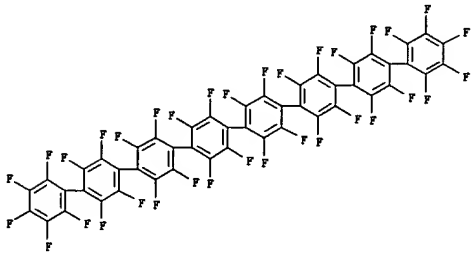
L12 ANSWER 1 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:692913 CAPLUS
DOCUMENT NUMBER: 134:34829
TITLE: Perfluorinated oligo(p-phenylene)s. Efficient n-type semiconductors for organic light-emitting diodes
AUTHOR(S): Heidenhain, Sophie B.; Sakamoto, Youichi; Suzuki, Toshiyasu; Miura, Atsushi; Fujikawa, Hisayoshi; Mori, Tomohiko; Tokito, Shizuo; Taga, Yasunori
CORPORATE SOURCE: Institute for Molecular Science, Okazaki, 444-8585, Japan
SOURCE: Journal of the American Chemical Society (2000), 122(41), 10240-10241
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB To develop efficient org. n-type semiconductors, perfluorinated phenylene oligomers (PF-nP: n = 5-8) with even longer para-conjugation were synthesized by organocopper cross-coupling technique and fully characterized. The oligomers were then used for the fabrication of org. light-emitting diodes (OLEDs). The OLEDs were exam. with respect to luminance-voltage and current-voltage characteristics as a function of the electron-transport layer.
IT **17221-18-0P 18606-18-3P**
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)
(electron transport layer; prepn. of perfluorinated oligo(p-phenylene)s used as efficient n-type semiconductors for org. LEDs)
RN 17221-18-0 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':Septiphenyl, 2,2',2'',2''',2'''',2''''',2'''''',3,3',3'',3''',3'''',3''''',3''''''',4',4'''''',5,5',5'',5''',5'''',5''''',5'''''',6,6',6'',6''',6'''',6''''',6''''''-triacontafluoro- (9CI) (CA INDEX NAME)



RN 18606-18-3 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4''',1''''':4''''',1'''''':4''''''',1''''''''-Octiphenyl, 2,2',2'',2''',2'''',2''''',2'''''',2''''''',3,3',3'',3''',3

L12 ANSWER 1 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)
''''',3''''',3''''''',3'''''''',4,4''''''',5,5',5'',5''',5'''',5''''',5''''''',5''''''',6,6',6'',6''',6'''',6''''',6''''''',6'''''''-tetratriacontafluoro- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 2 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:621102 CAPLUS
DOCUMENT NUMBER: 133:309641
TITLE: MALDI-TOF Mass Spectrometry of Insoluble Giant Polycyclic Aromatic Hydrocarbons by a New Method of Sample Preparation
AUTHOR(S): Przybilla, Laurence; Brand, Johann-Diedrich; Yoshimura, Kimihiro; Raeder, Hans Joachim; Muellen, Klaus
CORPORATE SOURCE: Max-Planck-Institut fuer Polymerforschung, Mainz, D-55128, Germany
SOURCE: Analytical Chemistry (2000), 72(19), 4591-4597
CODEN: ANCHAM; ISSN: 0003-2700
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The insoly. of giant polycyclic arom. hydrocarbons (PAHs) prevents their characterization by conventional anal. methods, which require a solubilization of the analyte. Laser desorption mass spectrometry may be used to analyze insol. samples but is limited to relatively low mol. wts. (.apprx.2000), in the case of PAHs. To overcome this limitation, we applied MALDI-TOF mass spectrometry. Since MALDI sample prepn. also requires soly. of analyte and matrix mols., the sample prepn. needed modification. The giant PAHs (>2000 Da) were investigated after using a new sample prepn., consisting of mech. mixing analyte and matrix without any solubilization procedures. This solvent-free process allows insol. compds. to be characterized. Furthermore, new org. mols. can be used as a matrix. Indeed, 7,7,8,8-tetracyanoquinodimethane, a new matrix with promising properties, has proven to be particularly suitable for the measurement of PAHs. Thanks to the successful characterization with MALDI-TOF mass spectrometry, the chem. design of giant PAHs, which was hindered until now for a lack of anal. methods, can now continue to develop.
IT **196505-80-3**
RL: ANT (Analyte); PRP (Properties); ANST (Analytical study)
(mass spectrometry of insol. giant polycyclic arom. hydrocarbons by a new method of sample prepn.)
RN 196505-80-3 CAPLUS
CN 1,1':2',1'':4'',1''':2''',1'''':4''''',1''''':2''''',1'''''':Septiphenyl, 3''''',4',4''''',5',5''''',6'-hexaphenyl-3''''',4''',5''',6'''-tetrakis(3',4',5'-triphenyl[1,1':2',1''-terphenyl]-4-yl)- (9CI) (CA INDEX NAME)

L12 ANSWER 2 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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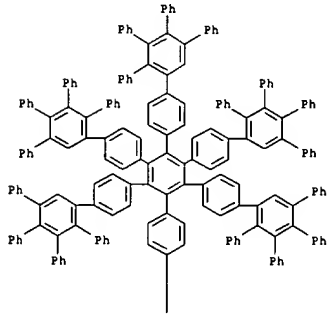

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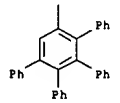
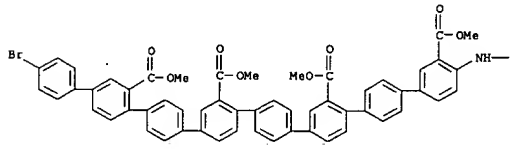


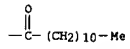
REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 3 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:609234 CAPLUS
DOCUMENT NUMBER: 133:321677
TITLE: Convenient Iterative Synthesis of an Octameric Tetracarboxylate-Functionalized Oligophenylene Rod with Divergent End Groups
AUTHOR(S): Read, Mark W.; Escobedo, Jorge O.; Willis, Douglas M.; Beck, Patricia A.; Strongin, Robert M.
CORPORATE SOURCE: Department of Chemistry, Louisiana State University, Baton Rouge, LA, 70803, USA
SOURCE: Organic Letters (2000), 2(20), 3201-3204
CODEN: ORLEF7; ISSN: 1523-7060
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 133:321677
AB Oligo(p-phenylene) rigid rod (I) is synthesized via a functional group-tolerant mol. doubling approach. Preparative chromatog. methods, protecting groups, boronic acid isolations, and Grignard or organolithium reagents are not used. The convenient synthesis of well-defined, polar-functionalized oligophenylene rigid rods could afford ready access to a variety of useful electronic org. materials.
IT **303030-17-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(convergent iterative synthesis of octameric tetracarboxylate-functionalized oligophenylene rod with divergent end groups)
RN 303030-17-3 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1''''''-Octiphenyl]-2'',2'''',2''''''-tetracarboxylic acid, 4'''''''-bromo-4-[(1-oxododecyl)amino]-, tetramethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



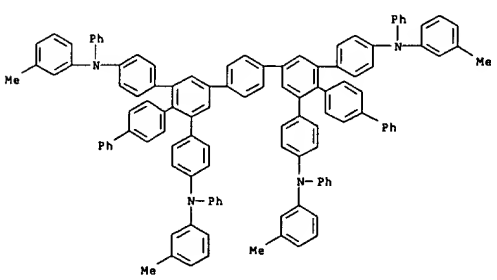
REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS

L12 ANSWER 3 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 4 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:452490 CAPLUS
DOCUMENT NUMBER: 133:81652
TITLE: Novel nonpolymeric polyamines, their preparations, and their use as hole transportation materials
INVENTOR(S): Fujino, Yasumitsu; Ueda, Hideaki; Furukawa, Keiichi
PATENT ASSIGNEE(S): Minolta Camera Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 28 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000186066	A2	20000704	JP 1998-364801	19981222

PRIORITY APPLN. INFO.: JP 1998-364801 19981222
OTHER SOURCE(S): MARPAT 133:81652
AB Novel amino compds. I [Ar1 = (un)substituted arylene, single bond; Ar2 = (un)substituted arylene; R1-2 = alkyl, aralkyl, (un)substituted aryl, (un)substituted arom. heterocycle; R1 and R2 may form ring; X = N, CH, CAr3; Ar3 = (un)substituted aryl] are claimed. Manuf. of I by reaction of II (Y = halogen) and NHR1R2, and other multistep reactions, from compds. given in Markush structures, are also claimed. Use of the I as a hole transportation compd., its use in org. electroluminescent devices and electrophotog. charge transport materials are also claimed. Electrophotog. photoconductors having excellent initial image-forming properties and durable electroluminescent devices are obtained.
IT **280113-00-0 280113-01-1 280113-03-3 280113-04-4**
RL: DEV (Device component use); USES (Uses)
(manuf. of arom. nonpolymeric polyamines as hole transportation agents in electrophotog. photoconductors and electroluminescent devices)
RN 280113-00-0 CAPLUS
CN [1,1':3',1'':4'',1''':3''',1''''-Quinquephenyl]-4,4''''-diamine, N,N'-bis(3-methylphenyl)-5',5''''-bis[4-[(3-methylphenyl)phenylamino]phenyl]-N,N'-diphenyl- (9CI) (CA INDEX NAME)



L12 ANSWER 4 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)
RN 280113-01-1 CAPLUS
CN 9H-Carbazole, 9,9'-[2'-[1,1'-biphenyl]-4-yl-5'-[3',5'-bis[4-(9H-carbazol-9-yl)phenyl][1,1':4',1''':4'',1''''-quaterphenyl]-4-yl][1,1':3',1''-terphenyl]-4,4''-diyl]bis- (9CI) (CA INDEX NAME)

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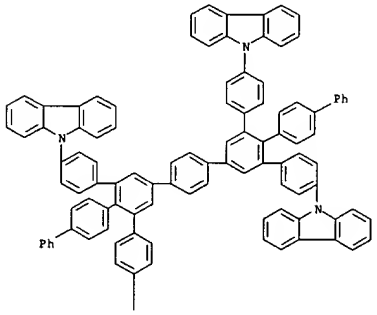
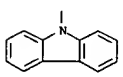


PAGE 2-A



RN 280113-03-3 CAPLUS
CN 9H-Carbazole, 9,9'-[5',5'''-bis[4-(9H-carbazol-9-yl)phenyl]-4'''',6'-bis(4'-methyl[1,1'-biphenyl]-4-yl)[1,1':3',1'':4'',1''':3''',1''''-quinquephenyl]-4,4''''-diyl]bis- (9CI) (CA INDEX NAME)

L12 ANSWER 4 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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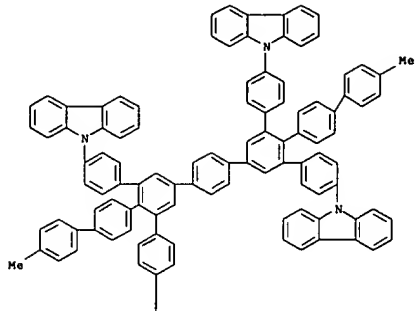

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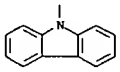

RN 280113-04-4 CAPLUS
CN 10H-Phenothiazine, 10,10'-[4''',6'-bis(4'-methyl[1,1'-biphenyl]-4-yl)-5',5'''-bis[4-(10H-phenothiazin-10-yl)phenyl][1,1':3',1'':4'',1''':3''',1'''-quinquephenyl]-4,4''''-diyl]bis- (9CI) (CA INDEX NAME)

L12 ANSWER 4 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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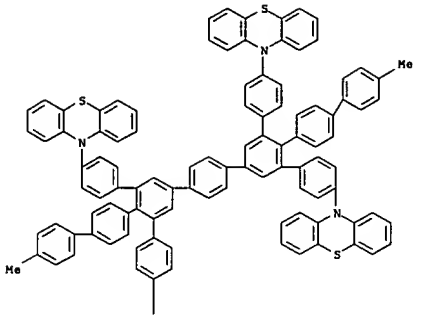

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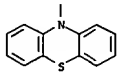

L12 ANSWER 5 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2000:403681 CAPLUS
DOCUMENT NUMBER: 133:177744
TITLE: Formation of nanorods by self-assembly of alkyl-substituted polyphenylene dendrimers on graphite
AUTHOR(S): Loi, Simona; Butt, Hans-Jurgen; Wiesler, Uwe-Martin; Mullen, Klaus
CORPORATE SOURCE: Inst. Phys. Chem., Universitat Mainz, Mainz, 55099, Germany
SOURCE: Chemical Communications (Cambridge) (2000), (13), 1169-1170
CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Alkyl-substituted polyphenylene dendrimers with a tetrahedral or disk-like shape form self-assembled monolayers on graphite (HOPG) which show complex supramol. structures, such as parallel rods of 6 nm diam. or two-dimensional crystals.

IT 189619-34-9
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(formation of nanorods by self-assembly of alkyl-substituted polyphenylene dendrimers on graphite)

RN 189619-34-9 CAPLUS
CN 1,1':2',1'':4'',1''':3''',1'''':4'''',1''''':2''''',1'''''':4'''''',1''''''':3'''''',1'''''''':4'''''''',1''''''''':2''''''''',1'''''''''-Undeciphenyl, 2''',2''''''',3''''',3'''''''',4',4''''',4''''''',5',5''',5''''',5''''''',5'''''''',6',6''''-tetradecaphenyl-4'''''',6'''-bis(3',4',5'-triphenyl[1,1':2',1''-terphenyl]-4-yl)- (9CI) (CA INDEX NAME)

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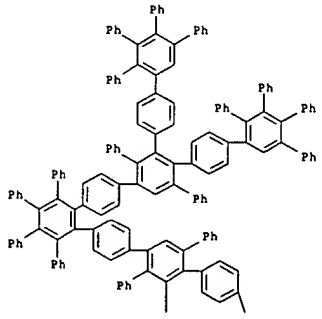

L12 ANSWER 5 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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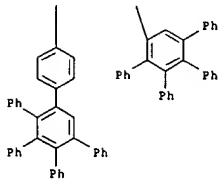
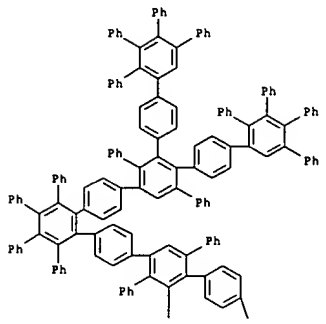


REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

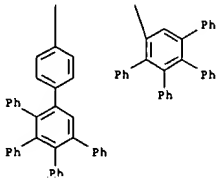
L12 ANSWER 6 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:396974 CAPLUS
DOCUMENT NUMBER: 133:267301
TITLE: Properties of Single Dendrimer Molecules Studied by Atomic Force Microscopy
AUTHOR(S): Zhang, Hua; Grim, P. C. M.; Foubert, P.; Vosch, T.; Vanoppen, P.; Wiesler, U.-M.; Berresheim, A. J.; Muellen, K.; De Schryver, F. C.
CORPORATE SOURCE: Laboratory for Molecular Dynamics and Spectroscopy Department of Chemistry, Katholieke Universiteit Leuven (KULeuven), Heverlee, B-3001, Belg.
SOURCE: Langmuir (2000), 16(23), 9009-9014
CODEN: LANGD5; ISSN: 0743-7463
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Well-sepd., individual polyphenylene dendrimer mols. have been prepd. by spin coating on a mica surface, and subsequently imaged by noncontact at. force microscopy (NCAFM). The obsd. height is in good agreement with the size of a single dendrimer mol., as calcd. by mol. dynamics simulation. By using pulsed force mode (PFM) AFM, stiffness and adhesion properties of individual polyphenylene dendrimers have been studied. They could be related to the mol. structure and the chem. nature of the outer surface of the dendrimers and the thin film of water adsorbed on mica when imaged under ambient conditions. Finally, by changing the concn. of the spin-coating soln., two different kinds of aggregates have been characterized.
IT **189619-34-9**
RL: PRP (Properties)
(properties of single dendrimer mols. spin-coated on mica studied by at. force microscopy)
RN 189619-34-9 CAPLUS
CN 1,1':2',1'':4'',1''':3''',1'''':4'''',1''''':2''''',1''''''':4''''''',1''''''':3''''''',1'''''''':4'''''''',1'''''''':2'''''''',1'''''''''-Undeciphenyl, 2''',2''''''',3''''',3'''''''',4',4''''',4'''''''',5',5''',5''''',5''''''',5'''''''',6',6''''-tetradecaphenyl-4''''''',6'''-bis(3',4',5'-triphenyl[1,1':2',1''-terphenyl]-4-yl)- (9CI) (CA INDEX NAME)

L12 ANSWER 6 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

PAGE 1-A



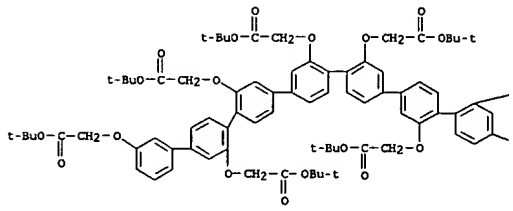
PAGE 2-A



REFERENCE COUNT: 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

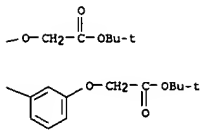
L12 ANSWER 7 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:358921 CAPLUS
DOCUMENT NUMBER: 133:164318
TITLE: Rigid-rod .beta.-barrels as lipocalin models: probing confined space by carotenoid encapsulation
AUTHOR(S): Baumeister, Bodo; Matile, Stefan
CORPORATE SOURCE: Department of Organic Chemistry, University of Geneva, Geneva, 1211/4, Switz.
SOURCE: Chemistry--A European Journal (2000), 6(10), 1739-1749
CODEN: CEUJED; ISSN: 0947-6539
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 133:164318
AB The authors describe the design, synthesis, structure, and function of synthetic, supramol. .beta.-barrel models. Assembly of octi(p-phenylene)s with complementary -Lys-Leu-Lys-NH2 and - Glu-Leu-Glu-NH2 side chains yielded water-sol. rigid-rod .beta.-barrels of precise length and with flexible diam. A hydrophobic interior was evidenced by guest encapsulation. Host-guest complexes with planarized, monomeric .beta.-carotene within tetrameric rigid-rod .beta.-barrels, and disk micellar astaxanthin J-aggregates surrounded by about dodecameric rigid-rod "bicycle tires" were prepd. from mixed micelles by dialytic detergent removal. The significance of these findings for future bioorg. chem. in confined, intratoroidal space is discussed in comparison with pertinent biol. examples.
IT **225656-07-5**
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of rigid-rod .beta.-barrels as lipocalin models)
RN 225656-07-5 CAPLUS
CN Acetic acid, 2,2',2'',2''',2'''',2''''',2'''''',2'''''''-[[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1''''''':4''''''',1'''''''':4'''''''',1'''''''''-octiphenyl]-2'',2''''',2''''''',3,3',3''',3''''',3'''''''-octayloctakis(oxy)]octakis-, octakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

PAGE 1-A

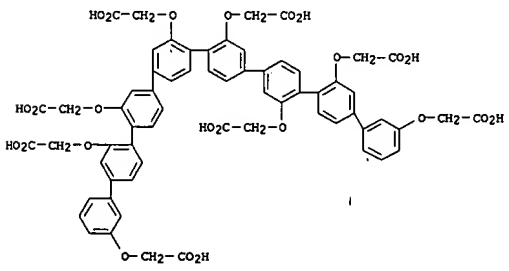


L12 ANSWER 7 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

PAGE 1-B



IT **225656-08-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of rigid-rod .beta.-barrels as lipocalin models)
RN 225656-08-6 CAPLUS
CN Acetic acid, 2,2',2'',2''',2'''',2''''',2'''''',2'''''''-[[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1'''''''':4'''''''',1'''''''''-octiphenyl]-2'',2''''',2''''''',3,3',3''',3''''',3'''''''-octayloctakis(oxy)]octakis- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 99 THERE ARE 99 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 8 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:273322 CAPLUS
DOCUMENT NUMBER: 133:219171
TITLE: Chiroptical rhythmicity, part 3: implications on the activity of the functional cell-surface receptor model
AUTHOR(S): Tedesco, M. M.; Ghebremariam, B.; Matile, S.
CORPORATE SOURCE: Department of Chemistry, Georgetown University, Washington, DC, USA
SOURCE: Colloids and Surfaces, A: Physicochemical and Engineering Aspects (2000), 169(1-3), 5-11
CODEN: CPEAEH; ISSN: 0927-7757
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The effect of ligand-induced rhythmical structural changes of the artificial receptor 1 on its capacity to mediate ion transport across lipid bilayer membranes was studied. The changes of the intravesicular pH of egg yolk phosphatidylcholine-small unilamellar vesicles (EYPC-SUVs) after application of a transmembrane proton gradient were measured by double-channel fluorescence kinetics in the presence of 1 at various concns. of the extravesicular ligand l-His. Comparison with neg. control expts. using d-His indicated that increasing concns. of l-His affect the activity of 1 in a presumably rhythmical manner. Compared to the extent of structural rhythmicity, the functional rhythmicity of 1 appeared, however, less significant. The need for refined assay systems to fully delineate the importance of rhythmical activity of 1 with respect to biol. rhythmicity is briefly discussed.

IT **211382-14-8**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(chiroptical rhythmicity, implications on the activity of the functional cell-surface receptor model)

RN 211382-14-8 CAPLUS
CN Glycine, N-(carboxymethyl)-N-[2-[2-[2-[[2'''''',3''''''-diethoxy-2',2''',3'',3''''-tetramethyl[1,1':4',1'':4'',1''':4''',1'''':4'''',1'''''':4''''''-1''''''-septiphenyl]-4-yl]oxy]ethoxy]ethoxy]ethyl]- (9CI) (CA INDEX NAME)

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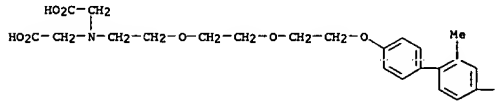
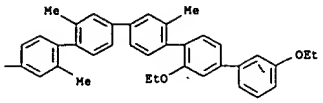


L12 ANSWER 8 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

PAGE 1-B



REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

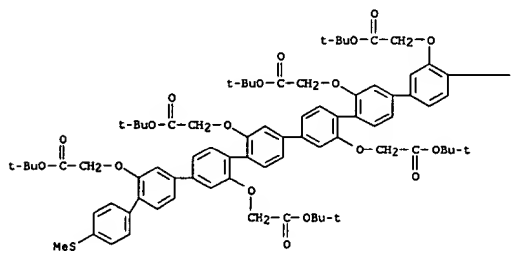
L12 ANSWER 9 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:788496 CAPLUS
DOCUMENT NUMBER: 132:122604
TITLE: Synthesis of multiply substituted, ion channel forming octi(p-phenylene)s: theme and variations
AUTHOR(S): Robert, Fabien; Winum, Jean-Yves; Sakai, Naomi; Gerard, David; Matile, Stefan
CORPORATE SOURCE: Department of Organic Chemistry, University of Geneva, Geneva, CH-1211, Switz.
SOURCE: Organic Letters (2000), 2(1), 37-39
CODEN: ORLEF7; ISSN: 1523-7060
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 132:122604

AB To facilitate the access to unique models for biol. processes, the authors examd. six different synthetic routes to octi(p-phenylene) rods I with lateral and terminal substituents R and R1 [R = (18-azacrown-6)COCH2, Me3CO2CCH2; R1 = Me]. This systematic study allowed them to increase to overall yield for the synthesis of a new class of oligo(p-phenylene) ionophores about 20 times and to provide general insights into the practicability of synthetic routes to multiply substituted mol. rods. The key step in the prepn. is the palladium-catalyzed coupling of a 4,4'-(1,1'-biphenyl)bisboronic acid ester with a 4,4'-diiodo-3,3'-dialkoxybiphenyl to give a diiodo-substituted hexi(p-phenylene) deriv.

IT **256387-80-1P 256387-82-3P 256387-83-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of octi(p-phenylene)s)

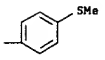
RN 256387-80-1 CAPLUS
CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''''-[(4,4'''''''-bis(methylthio)[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''':4'''''''-octiphenyl]-2',2''',2''''',3'',3''''',3''''''-hexayl]hexakis(oxy)}hexakis-, hexakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

PAGE 1-A



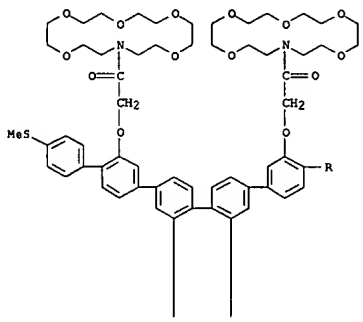
L12 ANSWER 9 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

PAGE 1-B



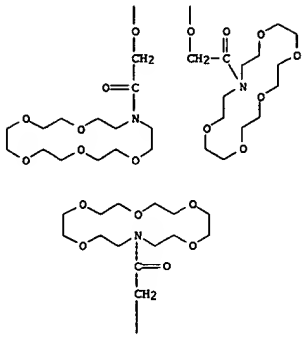
RN 256387-82-3 CAPLUS
CN 1,4,7,10,13-Pentaoxa-16-azacyclooctadecane, 16,16',16'',16''',16'''',16'''''-[[4,4'''''''-bis(methylthio)[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''':4'''''''-octiphenyl]-2',2''',2''''',3'',3''''',3''''''-hexayl]hexakis[oxy(1-oxo-2,1-ethanediyl)]]hexakis- (9CI) (CA INDEX NAME)

PAGE 1-A

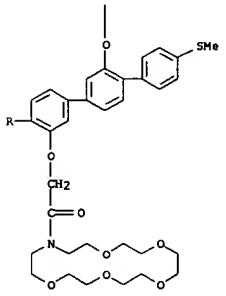


L12 ANSWER 9 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

PAGE 2-A



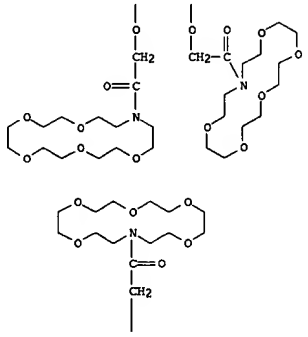
PAGE 3-A



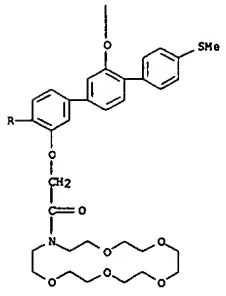
RN 256387-83-4 CAPLUS
CN 1,4,7,10,13-Pentaoxa-16-azacyclooctadecane, 16,16',16'',16''',16'''',16'''

L12 ANSWER 9 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

PAGE 2-A



PAGE 3-A

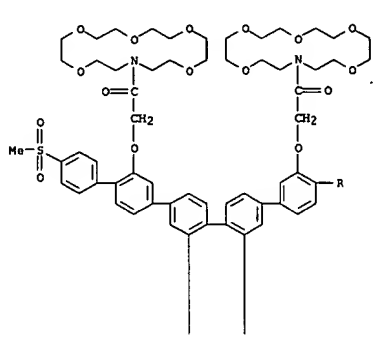


REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 9 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

'''-[[4-(methylsulfonyl)-4''''''-(methylthio)[1,1':4',1'':4'',1''':4''',1'''':4''''',1''''':4''''',1'''''':4''''''-octiphenyl]-2',2''',2''''',3'',3''''',3''''''-hexayl]hexakis[oxy(1-oxo-2,1-ethanediyl)]]hexakis- (9CI) (CA INDEX NAME)

PAGE 1-A



L12 ANSWER 10 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN

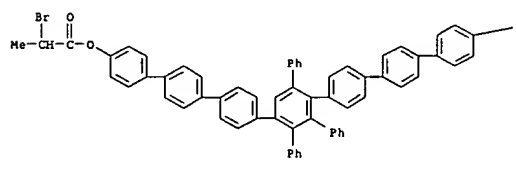
ACCESSION NUMBER: 1999:766469 CAPLUS
DOCUMENT NUMBER: 132:93708
TITLE: Synthesis of Rigid-Flexible Triblock Copolymers Using Atom Transfer Radical Polymerization
AUTHOR(S): Tsolakis, P. K.; Koulouri, E. G.; Kallitsis, J. K.
CORPORATE SOURCE: Department of Chemistry, University of Patras, Patras, 265 00, Greece
SOURCE: Macromolecules (1999), 32(26), 9054-9058
CODEN: MAMOBX; ISSN: 0024-9297
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A simple method based on atom-transfer radical polymn. of styrene using monodispersed .alpha.,.omega.-bromo-functionalized oligophenylenes as initiator for the prepn. of rigid-flexible block copolymer was presented. Copolymers with low polydispersities and showing blue light emission were obtained using the above-described methodol.

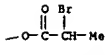
IT **255053-01-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(initiator; prepn. of bromo-functionalized oligophenylene initiator for prepn. of rigid-flexible triblock copolymer)

RN 255053-01-1 CAPLUS
CN Propanoic acid, 2-bromo-, 2''',3''',5'''-triphenyl[1,1':4',1'':4'',1''':4'',1'''':4''''',1''''':4''''',1''''''-septiphenyl]-4,4''''''-diyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



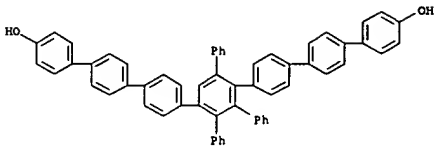
PAGE 1-B



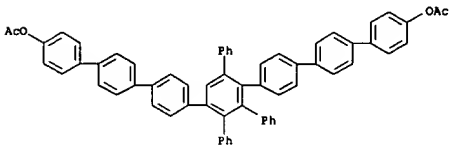
IT **255053-00-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and characterization of)

RN 255053-00-0 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4''''',1''''':4''''',1''''''-Septiphenyl]-4,4''''''-diol, 2''',3''',5'''-triphenyl- (9CI) (CA INDEX NAME)

L12 ANSWER 10 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)



IT 255052-99-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and hydrolysis of)
RN 255052-99-4 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Septiphenyl]-4,4''''''-diol, 2''',3''',5'''-triphenyl-, diacetate (9CI) (CA INDEX NAME)



REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 11 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:590612 CAPLUS
DOCUMENT NUMBER: 131:357543
TITLE: Improved stability of interfaces in organic light emitting diodes with high Tg materials and self-assembled monolayers
AUTHOR(S): Carrard, M.; Goncalves-Conto, S.; Si-Ahmed, L.; Ade, D.; Siove, A.
CORPORATE SOURCE: Departement de Physique, Laboratoire de Physique des Solides Semicristallins, Ecole Polytechnique Federale de Lausanne, Lausanne, CH-1015, Switz.
SOURCE: Thin Solid Films (1999), 352(1,2), 189-194
CODEN: THSFAP; ISSN: 0040-6090
PUBLISHER: Elsevier Science S.A.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB To improve the thermal stability of org. light emitting diodes (OLED), films made of classical hole transporters (TPD and NPB) and of new blue emitters (based on carbazole dimers) were deposited on bare ITO substrates, and on ITO grafted with 3 different self-assembled mols. These materials have low (60-70.degree.) and high (90-100.degree.) glass transition temps. (Tg). The surface properties like desorption, surface diffusion and wettability, were studied by observing the morphol. of the films with SEM. High Tg films show higher stability and reduced desorption. A similar effect is obtained with the grafted substrates. These tendencies can be explained by considering the polarizability of the mols. This points towards possible improvements in the running temp. of OLED devices.
IT 221018-07-1
RL: DEV (Device component use); USES (Uses)
(improved stability of interfaces in org. LEDs with high glass transition temp. materials and self-assembled monolayers contg.)
RN 221018-07-1 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''':4''''''',1''''''''':4'''''''',1'''''''':4''''''''',1''''''''':4'''''''''-Deciphenyl]-4-butanoic acid, 4'''''''''-(2-methylpropyl)-.gamma.-oxo- (9CI) (CA INDEX NAME)

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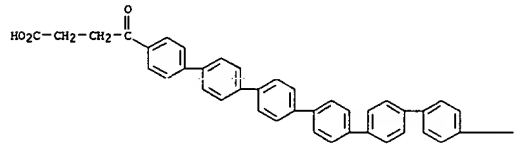
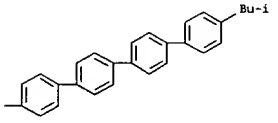


L12 ANSWER 11 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

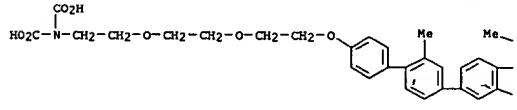
PAGE 1-B



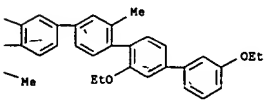
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 12 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:533322 CAPLUS
DOCUMENT NUMBER: 131:253994
TITLE: Chiroptical rhythmicity, part 2: evidence for signal transduction by stereoselective ion pair formation at the membrane/water interface
AUTHOR(S): Ghebremariam, Bereket; Matile, Stefan
CORPORATE SOURCE: Department of Chemistry, Georgetown University, Washington, DC, 20057, USA
SOURCE: Enantiomer (1999), 4(2), 131-139
CODEN: EANTE2; ISSN: 1024-2430
PUBLISHER: Gordon & Breach Science Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The initiation mechanism of chiroptical rhythmicity, a novel chiroptical phenomenon (Ghebremariam and Matile preceding contribution), was investigated by exploring the functionality of five structural analogs of the inducing L-His ligand. Disappearance of chiroptical rhythmicity with L-His Me esters as well as with D-His implied that stereoselective ion pair formation between carboxylate anion of L-His bound at the membrane/water interface and ammonium cations of phosphatidylcholine is essential for signal transduction to the hydrophobic core of the membrane. It was further shown that "H" aggregation of the asym. septi(p-phenylene) chromophore induced by multivalent L-His (i.e., poly-L-His) exceeds the extent required for chiroptical rhythmicity by far and ultimately results in the formation of achiral herring-bone lattices.
IT 244782-02-3
RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)
(chiroptical rhythmicity in the interaction of septiphenylene chromaphore with histidine and phosphatidylcholines in bilayer membrane)
RN 244782-02-3 CAPLUS
CN Imidodicarbonic acid, [2-[2-[(2''''',3''''''-diethoxy-2',2''',3'',3''''-tetramethyl[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''-septiphenyl]-4-yl)oxy]ethoxy]ethoxy]ethyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

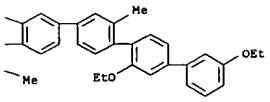


L12 ANSWER 12 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 13 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

PAGE 1-B



REFERENCE COUNT: 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 13 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN

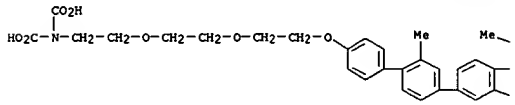
ACCESSION NUMBER: 1999:533321 CAPLUS
DOCUMENT NUMBER: 131:254513
TITLE: Chiroptical rhythmicity, part 1: description of a novel phenomenon
AUTHOR(S): Ghebremariam, Bereket; Matile, Stefan
CORPORATE SOURCE: Department of Chemistry, Georgetown University, Washington, DC, 20057, USA
SOURCE: Enantiomer (1999), 4(2), 121-130
CODEN: EANTE2; ISSN: 1024-2430
PUBLISHER: Gordon & Breach Science Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A novel chiroptical phenomenon named "chiroptical rhythmicity" is described. Chiroptical rhythmicity consists of multiple reversible CD Cotton effect sign inversions that follow a rhythmical pattern with respect to the continuous addn. of a ligand (L-His) to the sample (a septi(p-phenylene)-based receptor bound to phosphatidylcholine bilayers). Decrease and blue-shift of the 1La absorption of the oligophenylene chromophore indicated that partial "H" aggregation occurs during chiroptical rhythmicity. Based on stereochem. considerations for monomeric and tetrameric oligophenylenes, a hypothetical mechanism is discussed.

IT **244782-02-3**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(multiple reversible CD Cotton effect inversions (chiroptical rhythmicity) of septiphenylene chromophore in phosphatidylcholine bilayer membrane)

RN 244782-02-3 CAPLUS
CN Imidodicarbonic acid, [2-[2-[(2'''',3''''''-diethoxy-2',2''',3'',3''''-tetramethyl[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-septiphenyl]-4-yl)oxy]ethoxy]ethoxy]ethyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



L12 ANSWER 14 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1999:505285 CAPLUS
DOCUMENT NUMBER: 131:219474
TITLE: Rigid push-pull oligo(p-phenylene) rods. Depolarization of bilayer membranes with negative membrane potential
AUTHOR(S): Winum, Jean-Yves; Matile, Stefan
CORPORATE SOURCE: Department of Chemistry, Georgetown University, Washington, DC, 20057, USA
SOURCE: Journal of the American Chemical Society (1999), 121(34), 7961-7962
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Rod-shaped compds. consisting of octakis(para-phenylene) scaffolds and 18-azacrown-6 lateral side-chains were prepd. The capacity of the rigid-rod ionophores to depolarize polarized small unilamellar vesicles composed of egg yolk phosphatidylcholine was assessed by double-channel fluorescence kinetics using safranin O as an extravesicular probe and the pH-sensitive 8-hydroxypyrene-1,3,6-trisulfonic acid as an intravesicular fluorescence probe. One of the compds. bearing a permanently fixed dipole moment was capable of depolarizing the bilayer membranes with a neg. membrane potential.

IT **243465-07-8P 243465-08-9P**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(depolarization of bilayer membranes with neg. membrane potential using push-pull oligo(p-phenylene) rod ionophores)

RN 243465-07-8 CAPLUS
CN 1,4,7,10,13-Pentaoxa-16-azacyclooctadecane, 16,16',16'',16'''-[(4-cyano-4''''''''-methoxy[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''':4''''''',1'''''''':4'''''''-octiphenyl]-2',2''''',3'',3''''''-tetrayl)tetrakis[oxy(1-oxo-2,1-ethanediyl)]]tetrakis- (9CI) (CA INDEX NAME)

L12 ANSWER 14 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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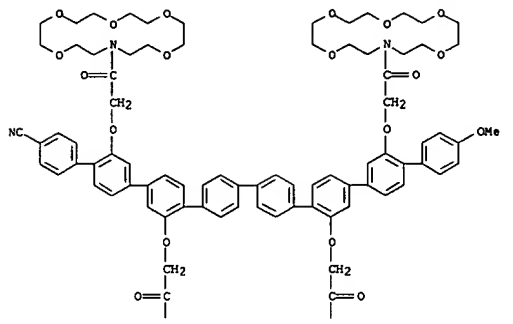
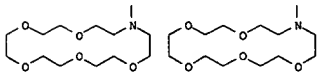


PAGE 2-A



RN 243465-08-9 CAPLUS
CN 1,4,7,10,13-Pentaoxa-16-azacyclooctadecane, 16,16',16'',16'''-[(4,4''''''-dicyano[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''':4''''''',1'''''''-octiphenyl]-2',2''''',3'',3''''''-tetrayl)tetrakis[oxy(1-oxo-2,1-ethanediyl)]]tetrakis- (9CI) (CA INDEX NAME)

L12 ANSWER 14 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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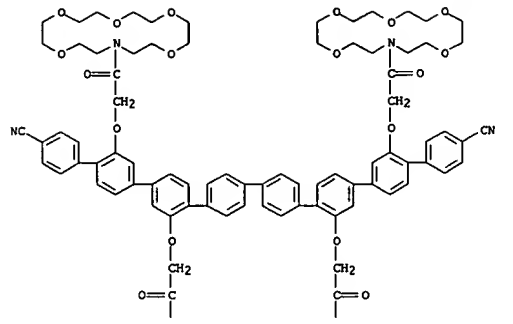
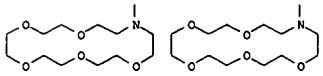
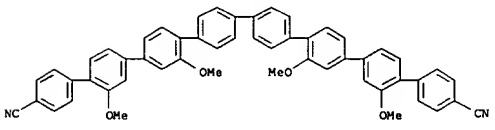


PAGE 2-A

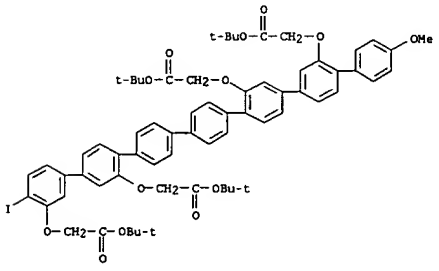


IT **243465-10-3P 243465-12-5P 243465-13-6P**
243465-14-7P 243465-15-8P 243465-16-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of rigid push-pull oligo(phenylene) rods)
RN 243465-10-3 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''':4''''''',1'''''''-Octiphenyl]-4,4''''''''-dicarbonitrile, 2',2''''',3'',3''''''-tetramethoxy- (9CI) (CA INDEX NAME)

L12 ANSWER 14 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

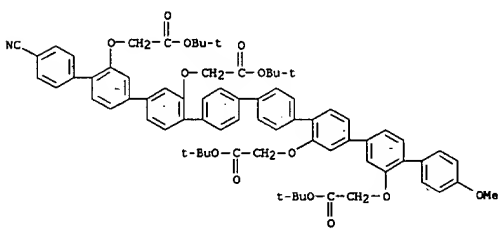


RN 243465-12-5 CAPLUS
CN Acetic acid, 2,2',2'',2'''-[(4-iodo-4''''''-methoxy[1,1':4',1'':4'',1''':4''',1'''':4''',1''''':4''''',1''''''':4''''''',1'''''''-septiphenyl]-2''',3,3',3'''''-tetrayl)tetrakis(oxy)]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

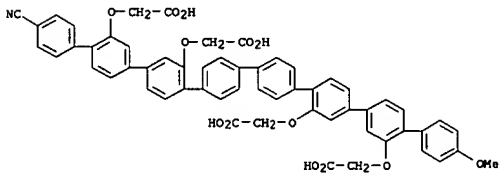


RN 243465-13-6 CAPLUS
CN Acetic acid, 2,2',2'',2'''-[(4-cyano-4''''''-methoxy[1,1':4',1'':4'',1''':4''',1'''':4''',1''''':4''''',1''''''':4''''''',1'''''''-octiphenyl]-2',2''''',3'',3''''''-tetrayl)tetrakis(oxy)]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

L12 ANSWER 14 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

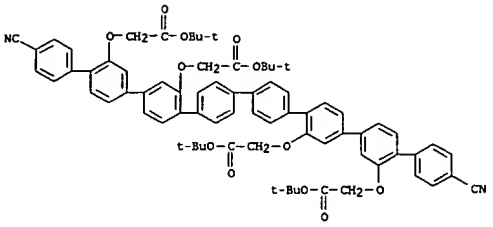


RN 243465-14-7 CAPLUS
CN Acetic acid, 2,2',2'',2'''-[(4-cyano-4''''''-methoxy[1,1':4',1'':4'',1''':4''',1'''':4''',1''''':4''''',1''''''':4''''''',1'''''''-octiphenyl]-2',2''''',3'',3''''''-tetrayl)tetrakis(oxy)]tetrakis- (9CI) (CA INDEX NAME)

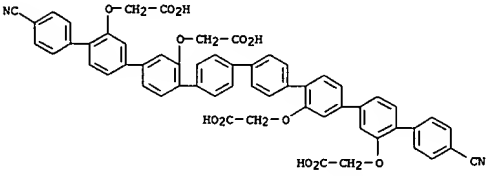


RN 243465-15-8 CAPLUS
CN Acetic acid, 2,2',2'',2'''-[(4,4''''''-dicyano[1,1':4',1'':4'',1''':4''',1'''':4''',1''''':4''''',1''''''':4''''''',1'''''''-octiphenyl]-2',2''''',3'',3''''''-tetrayl)tetrakis(oxy)]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

L12 ANSWER 14 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)



RN 243465-16-9 CAPLUS
CN Acetic acid, 2,2',2'',2'''-[(4,4''''''-dicyano[1,1':4',1'':4'',1''':4''',1''''':4''''',1'''''':4'''''',1''''''':4''''''',1'''''''-octiphenyl]-2',2''''',3'',3''''''-tetrayl)tetrakis(oxy)]tetrakis- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 15 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

L12 ANSWER 15 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:472246 CAPLUS
DOCUMENT NUMBER: 131:163199
TITLE: Organic electroluminescent device for low driving voltage
INVENTOR(S): Fuchigami, Hiroyuki; Tsunoda, Makoto
PATENT ASSIGNEE(S): Mitsubishi Electric Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

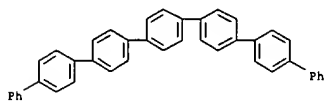
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11204266	A2	19990730	JP 1998-2027	19980108

PRIORITY APPLN. INFO.: JP 1998-2027 19980108

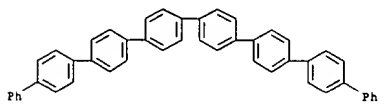
AB The title device has a hole-injecting layer between an anode and a light-emitting layer, and the hole-injecting layer comprises oligomers with .pi. conjugated system having ionization potential higher than that of the anode. The ionization potential is formed by mol. assemblies of the oligomers having a scattered ionization potential distribution from close to the ionization potential of the anode to close to that of the light-emitting layer. The device emits light in high luminescent efficiency with low driving voltage.

IT 70352-20-4 70352-21-5
RL: DEV (Device component use); USES (Uses)
(org. electroluminescent device contg. oligomer with .pi. conjugated system as hole-injecting material for low driving voltage)

RN 70352-20-4 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Septiphenyl (9CI) (CA INDEX NAME)



RN 70352-21-5 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1''''''''-Octiphenyl (9CI) (CA INDEX NAME)

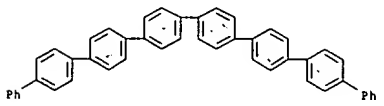


L12 ANSWER 16 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:459462 CAPLUS
DOCUMENT NUMBER: 131:200447
TITLE: Raman scattering of phenylene oligomers: influence of sample morphology
AUTHOR(S): Athouel, L.; Wery, J.; Dulieu, B.; Mevellec, J. Y.; Buisson, J. P.; Froyer, G.
CORPORATE SOURCE: Institut des Materiaux de Nantes, Universite de Nantes, Nantes, 44072, Fr.
SOURCE: Synthetic Metals (1999), 101(1-3), 629-630
CODEN: SYMEDZ; ISSN: 0379-6779
PUBLISHER: Elsevier Science S.A.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Poly(p-phenylene) oligomers and the corresponding polymer PPP were studied by Raman scattering from powder, thin film, single crystal and single mol. morphologies. The Raman intensities of the 1220, 1280 and 1600 cm-1 modes are compared with the mol. length and with the excitation wavelength, and show that the oligomers can be characterized with the values of their area ratio independent of the sample morphol. The 1600 cm-1 mode participates in the intensity transfer of the benzene respiration mode.

IT 70352-21-5, p-Octiphenyl
RL: PRP (Properties)
(sample morphol. effect on Raman scattering of phenylene oligomers)

RN 70352-21-5 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1''''''''-Octiphenyl (9CI) (CA INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 17 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1999:447144 CAPLUS
DOCUMENT NUMBER: 131:233877
TITLE: Self-assembled single-chain oligo(p-phenylene) amphiphiles: reversed micelles, vesicles and gels
AUTHOR(S): Sidorov, Vladimir; Dzekunov, Sergey M.; Abdallah, David; Ghebremariam, Bereket; Roepe, Paul D.; Matile, Stefan
CORPORATE SOURCE: Department of Chemistry, Georgetown University, Washington, DC, 20057-1227, USA
SOURCE: Chemical Communications (Cambridge) (1999), (15), 1429-1430
CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English

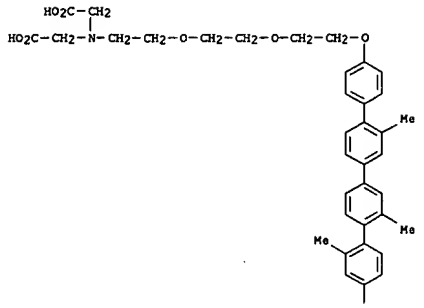
AB The diverse supramol. chem. of a rigid, T-shaped single-chain amphiphile, including giant vesicles, spherical and tubular reversed micelles, and gels, is described in comparison to that of rigid-rod amphiphiles of different length.

IT **211382-15-9 223462-81-5 223462-83-7 223462-84-8**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(reversed micelles, vesicles and gels in self-assembled single-chain oligo(p-phenylene) amphiphiles)

RN 211382-15-9 CAPLUS
CN Glycine, N-(carboxymethyl)-N-[2-[2-[2-[[2',2''',3'',3''''-tetramethyl-2''''',3''''''-bis(2-tricyclo[3.3.1.13,7]dec-2-ylethoxy)[1,1':4',1'':4'',1''':4''',1'''':4''',1''''':4''''',1''''''-septiphenyl]-4-yl]oxy]ethoxy]ethoxy]ethyl]- (9CI) (CA INDEX NAME)

L12 ANSWER 17 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

PAGE 1-A



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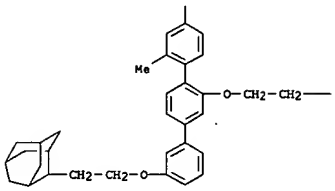

L12 ANSWER 17 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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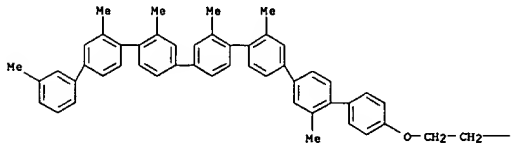
RN 223462-81-5 CAPLUS
CN Glycine, N-(carboxymethyl)-N-[2-[2-[2-[(2',2''',2''''',3'',3''''',3''''''-hexamethyl[1,1':4',1'':4'',1''':4''',1'''':4''',1''''':4''''',1''''''-septiphenyl]-4-yl)oxy]ethoxy]ethoxy]ethyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



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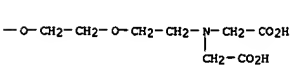
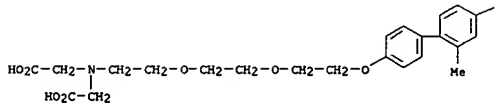


RN 223462-83-7 CAPLUS
CN Glycine, N-(carboxymethyl)-N-[2-[2-[2-[(2',2''',2''''',2'''''',3'',3''''',3''''''',3''''''''-octamethyl[1,1':4',1'':4'',1''':4''',1'''':4''',1''''':4''''',1''''''':4'''''',1'''''''':4''''''',1''''''''-noviphenyl]-4-yl)oxy]ethoxy]ethoxy]ethyl]- (9CI) (CA INDEX NAME)

L12 ANSWER 17 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

PAGE 1-A



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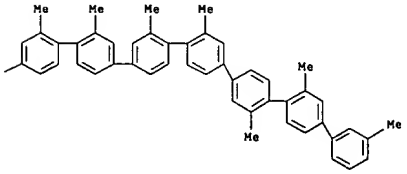
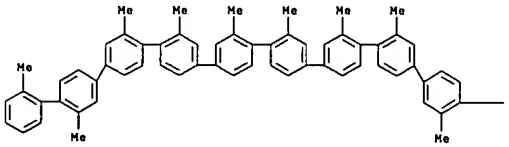


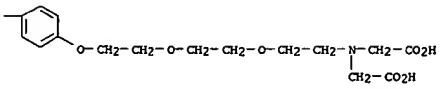
RN 223462-84-8 CAPLUS
CN Glycine, N-(carboxymethyl)-N-[2-[2-[2-[(2',2''',2''''',2'''''',2''''''''',3'',3''''',3''''''',3''''''''-nonamethyl[1,1':4',1'':4'',1''':4''',1'''':4''',1''''':4''''',1''''''':4'''''',1'''''''':4''''''',1''''''''-deciphenyl]-4-yl)oxy]ethoxy]ethoxy]ethyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



L12 ANSWER 17 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

PAGE 1-B



REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

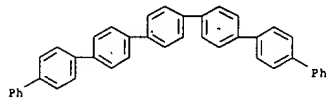
L12 ANSWER 18 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1999:438653 CAPLUS
DOCUMENT NUMBER: 131:191077
TITLE: Theoretical investigation of phenylene-based materials in their pristine and doped state
AUTHOR(S): Zojer, Egbert; Cornil, Jerome; Leising, Gunther; Bredas, Jean-Luc
CORPORATE SOURCE: Institut fur Festkorperphysik, Technische Universitat Graz, Graz, 8010, Austria
SOURCE: Optical Materials (Amsterdam) (1999), 12(2/3), 307-310
CODEN: OMATET; ISSN: 0925-3467
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Phenylene-based org. materials play an important role in org. device technol., esp. in light emitting diodes and displays. We have studied their geometries and optical transitions in both pristine and doped states, paying special attention to chain-length effects as well as to the implications of inter-ring twists considering also bridged ladder type mols. Our calcns. give an extent of four benzene rings for the geometry modifications assocd. with the formation of polarons and six to eight rings for bipolarons. We calc. two sub-gap absorption features for polarons in short-chain mols. and a single peak for bipolarons. In longer chains and for interacting bipolarons, this situation changes considerably within the theor. framework we use.

IT **70352-20-4 70352-21-5 133960-43-7 147188-63-4 147188-64-5 240413-32-5**
RL: PRP (Properties)
(optical absorption spectra and geometry calcns.)

RN 70352-20-4 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Septiphenyl (9CI) (CA INDEX NAME)



RN 70352-21-5 CAPLUS
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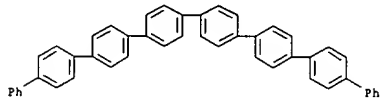
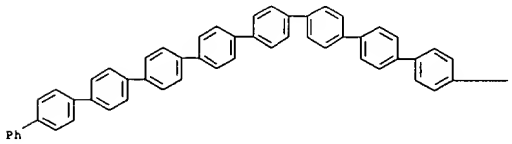


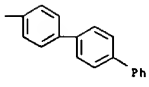
L12 ANSWER 18 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

RN 133960-43-7 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Dodeciphenyl (9CI) (CA INDEX NAME)

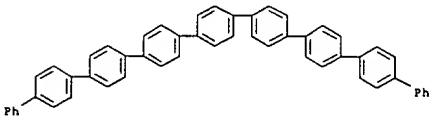
PAGE 1-A



PAGE 1-B

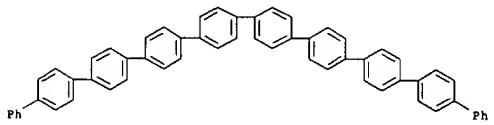


RN 147188-63-4 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Noviphenyl (9CI) (CA INDEX NAME)



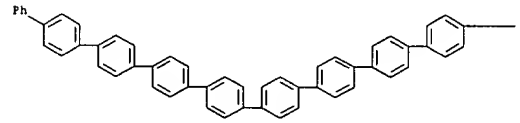
RN 147188-64-5 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Deciphenyl (9CI) (CA INDEX NAME)

L12 ANSWER 18 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

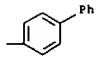


RN 240413-32-5 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Undeciphenyl (9CI) (CA INDEX NAME)

PAGE 1-A

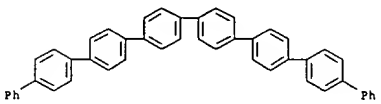


PAGE 1-B



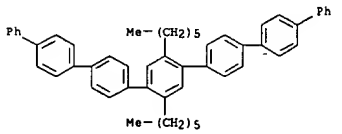
REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 19 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:431964 CAPLUS
DOCUMENT NUMBER: 131:228295
TITLE: From molecular states to band structure: Theoretical investigation of momentum dependent excitations in phenylene based organic materials
AUTHOR(S): Zojer, E.; Shuai, Z.; Leising, G.; Bredas, J. L.
CORPORATE SOURCE: Institut fur Festkorperphysik, Technische Universitat Graz, Graz, A-8010, Austria
SOURCE: Journal of Chemical Physics (1999), 111(4), 1668-1675
CODEN: JCPSA6; ISSN: 0021-9606
PUBLISHER: American Institute of Physics
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The electronic states in conjugated org. materials are usually characterized either by quantum-chem. approaches relying on a mol. picture, or by solid-state band structure models requiring infinite periodicity of the chains. In this contribution we present calcns. showing that a band structure like character is inherent also in mol. systems and discuss the gradual evolution of a full band structure upon increasing the no. of repeat units in oligomer mols. The main feature of a band structure approach is the description of the electronic eigenstates in momentum space. Therefore, a method was developed to describe momentum-dependent excitation processes in conjugated org. materials based on a post-Hartree-Fock approach including electron-electron correlation effects. The results of the simulations performed for oligo(phenylene)s of different chain lengths agree very well with exptl. EELS data.
IT **70352-21-5**, 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'
''''':4''''''', 1'''''''-Octiphenyl
RL: PRP (Properties)
(from mol. states to band structure: theor. study of momentum-dependent excitations in oligophenylenes)
RN 70352-21-5 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''':4''''''',1'''''
''-Octiphenyl (9CI) (CA INDEX NAME)

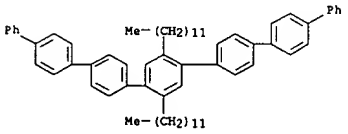


REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

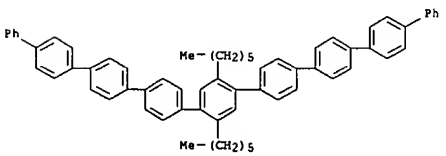
L12 ANSWER 20 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:395208 CAPLUS
DOCUMENT NUMBER: 131:185574
TITLE: Preparation and Characterization of Ultrathin Layers of Substituted Oligo- and Poly(p-phenylene)s and Mixed Layers with Octadecanethiol on Gold and Copper
AUTHOR(S): Brunner, Samuel; Caseri, Walter R.; Suter, Ulrich W.; Haehner, Georg; Brovelli, Dorothee; Spencer, Nicholas D.; Vinckier, Anja; Rau, Iris U.; Galda, Patrick; Rehahn, Matthias
CORPORATE SOURCE: Department of Materials Institute of Polymers, ETH, Zurich, CH-8092, Switz.
SOURCE: Langmuir (1999), 15(19), 6333-6342
CODEN: LANGD5; ISSN: 0743-7463
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Substituted poly(p-phenylene)s were adsorbed from soln. onto gold and copper and oligo(p-phenylene)s onto gold. The layers were investigated with IR spectroscopy at grazing incidence reflection, XPS, NEXAFS, ToF-SIMS, surface profilometry, AFM, SEM, optical microscopy, ellipsometry, and contact angle measurements to examine their formation and structure. The structure and the properties of the investigated layers depend not only on the chem. structure of the polymer but also on the type of substrate. On gold, the polymers form layers of 15-25 .ANG. in thickness and the oligomers of ca. 5 .ANG. in thickness. On copper, "thick" layers of up to 900 .ANG. were also obsd. The oligomers have a lower affinity to gold than the polymers. Mixed octadecanethiol-polymer layers were prepd. by immersion of polymer-coated substrates in an octadecanethiol soln. or by exposure of self-assembled monolayers of octadecanethiol to polymer solns. The structure of the mixed layers depends on the sequence of the exposure of the two components and on the chem. structure of the polymer. In the mixed layers, structures that protrude above the surroundings were frequently detected at the surface.
IT **178426-70-5 178426-71-6 178426-72-7 178426-73-8**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(prepn. and characterization of ultrathin layers of substituted oligo- and polyphenylenes and mixed layers with octadecanethiol on gold and copper)
RN 178426-70-5 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''-Septiphenyl, 2''',5'''-dihexyl- (9CI) (CA INDEX NAME)



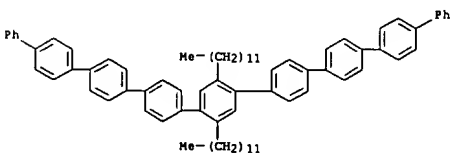
L12 ANSWER 20 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)
RN 178426-71-6 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''-Septiphenyl, 2''',5'''-didodecyl- (9CI) (CA INDEX NAME)



RN 178426-72-7 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''':4''''''',1''''
''':4'''''''',1''''''''-Noviphenyl, 2'''',5''''-dihexyl- (9CI) (CA INDEX NAME)

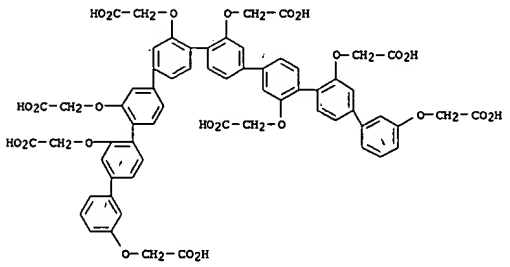


RN 178426-73-8 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''':4''''''',1''''
''':4'''''''',1''''''''-Noviphenyl, 2'''',5''''-didodecyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 21 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:390230 CAPLUS
DOCUMENT NUMBER: 131:144826
TITLE: Tetrameric octi(p-phenylene) self-assemblies in aqueous solution: proof of principle of a novel suprastructural motif
AUTHOR(S): Baumeister, Bodo; De Dios, Angel C.; Matile, Stefan
CORPORATE SOURCE: Department of Chemistry, Georgetown University, Washington, DC, 20057-1227, USA
SOURCE: Tetrahedron Letters (1999), 40(25), 4623-4625
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A general supramol. energy min. has been predicted for tetrameric "pinwheels", known as smallest units of herringbone-type suprastructures in H-aggregates and crystals of arom. chromophores. As a proof of principle, the authors describe octi(p-phenylene)s that quant. self-assemble into novel tetrameric supramols. in aq. soln.
IT **225656-08-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of in the synthesis of tetrameric octi(p-phenylene)s)
RN 225656-08-6 CAPLUS
CN Acetic acid, 2,2',2'',2''',2'''',2''''',2'''''',2'''''''-[[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1'''
''''-octiphenyl]-2'',2'''',2''''''',3,3',3''',3''''',3'''''''-octayloctakis(oxy)]octakis- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 22 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1999:234620 CAPLUS
DOCUMENT NUMBER: 131:37199
TITLE: Photonic wires of nanometric dimensions. Electronic energy transfer in rigid rodlike Ru(bpy)32+-(ph)n-Os(bpy)32+ compounds (ph = 1,4-phenylene; n = 3, 5, 7)
AUTHOR(S): Schlicke, Benedikt; Belser, Peter; De Cola, Luisa; Sabbioni, Eliana; Balzani, Vincenzo
CORPORATE SOURCE: Dipartimento di Chimica G. Ciamician, Universita di Bologna, Bologna, I-4126, Italy
SOURCE: Journal of the American Chemical Society (1999), 121(17), 4207-4214
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

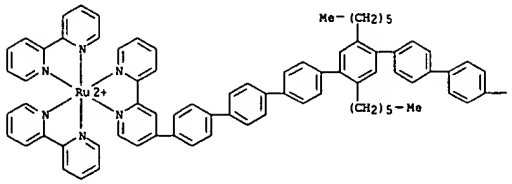
AB We synthesized nine rodlike compds. of nanometric dimension [M(bpy)3-(ph)n-M'(bpy)3]4+ (M:M' = Ru(II); M:M' = Os(II); M = Ru(II), M' = Os(II); bpy = 2,2'-bipyridine; ph = 1,4-phenylene; n = 3, 5, 7; the central phenylene unit bears two alkyl chains for soly. reasons; the metal-to metal distance is 4.2 nm for the longest spacer). The absorption spectra and the luminescence properties (emission spectra, quantum yields, and excited-state lifetimes) of the nine dinuclear complexes were studied in acetonitrile soln. at 293 K and in butyronitrile rigid matrix at 77 K. The results obtained were compared with those found for the sepd. chromophoric units ([Ru(bpy)3]2+, [Os(bpy)3]2+, and oligophenylene derivs.). The absorption spectrum of each dinuclear complex is essentially equal to the sum of the spectra of the component species, showing that intercomponent electronic interactions are weak. In the homodinuclear compds., the strong fluorescence of the oligophenylene spacers is completely quenched by energy transfer to the metal-based units, which exhibit their characteristic metal-to-ligand charge-transfer (MLCT) phosphorescence. In the heterodinuclear compds., besides complete quenching of the fluorescence of the oligophenylene spacers, a quenching of the phosphorescence of the [Ru(bpy)3]2+ chromophoric unit and a parallel sensitization of the phosphorescence of the [Os(bpy)3]2+ chromophoric unit are obsd., indicating the occurrence of electronic energy transfer. The rate of the energy-transfer process from the [Ru(bpy)3]2+ to the [Os(bpy)3]2+ unit is practically temp. independent and decreases with increasing length of the oligophenylene spacer (in acetonitrile soln. at 293 K, ken = 6.7 .times. 108 s-1 for n = 3; ken = 1.0 .times. 107 s-1 for n = 5; ken = 1.3 .times. 106 s-1 for n = 7). It is shown that such an energy-transfer process takes place via a Dexter-type mechanism (superexchange interaction) with an attenuation coeff. of 0.32 per .ANG. and 1.5 per interposed phenylene unit.

IT 226958-17-4P 226958-20-9P 226958-23-2P
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(fluorescence and electronic energy transfer)

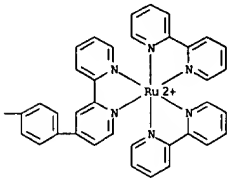
RN 226958-17-4 CAPLUS
CN Ruthenium(4+), tetrakis(2,2'-bipyridine-.kappa.N1,.kappa.N1')[.mu.-[4,4''-(2''',5'''-dihexyl[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''-septiphenyl]-4,4''''''-diyl)bis[2,2'-bipyridine-.kappa.N1,.kappa.N1']]]di- (9CI) (CA INDEX NAME)

L12 ANSWER 22 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

PAGE 1-A



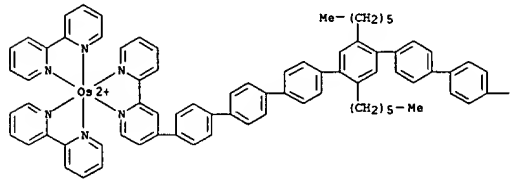
PAGE 1-B



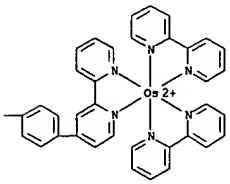
RN 226958-20-9 CAPLUS
CN Osmium(4+), tetrakis(2,2'-bipyridine-.kappa.N1,.kappa.N1')[.mu.-[4,4''-(2''',5'''-dihexyl[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''-septiphenyl]-4,4''''''-diyl)bis[2,2'-bipyridine-.kappa.N1,.kappa.N1']]]di- (9CI) (CA INDEX NAME)

L12 ANSWER 22 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

PAGE 1-A



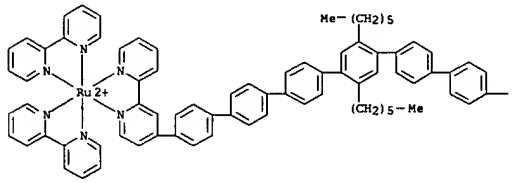
PAGE 1-B



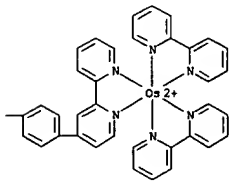
RN 226958-23-2 CAPLUS
CN Osmium(4+), bis(2,2'-bipyridine-.kappa.N1,.kappa.N1')[bis(2,2'-bipyridine-.kappa.N1,.kappa.N1')ruthenium][.mu.-[4,4''-(2''',5'''-dihexyl[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''-septiphenyl]-4,4''''''-diyl)bis[2,2'-bipyridine-.kappa.N1,.kappa.N1']]]-(9CI) (CA INDEX NAME)

L12 ANSWER 22 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

PAGE 1-A



PAGE 1-B

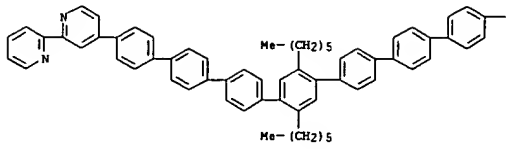


IT 225669-94-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of rod-like ruthenium/osmium dinuclear complexes with oligophenylene spacers using)

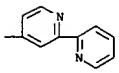
RN 225669-94-3 CAPLUS
CN 2,2'-Bipyridine, 4,4''-(2''',5'''-dihexyl[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''-septiphenyl]-4,4''''''-diyl)bis- (9CI) (CA INDEX NAME)

L12 ANSWER 22 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 84 THERE ARE 84 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 23 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:234613 CAPLUS
DOCUMENT NUMBER: 131:5486
TITLE: Self-Assembled Rigid-Rod Ionophores
AUTHOR(S): Sakai, Naomi; Majumdar, Nirmalya; Matile, Stefan
CORPORATE SOURCE: Department of Chemistry, Georgetown University, Washington, DC, 20057, USA
SOURCE: Journal of the American Chemical Society (1999), 121(17), 4294-4295
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Rigid-rod octamers (3-R2C6H4-2-R2-p-C6H3-3-R1-p-C6H3-2-R1-p-C6H3)2 [R1 = R2 = OCH2CO-Leu-NH2 (2), R1 = Me, R2 = OCH2CO-Leu-NH2 (3)] were prepd. in order to define the min. requirements for .beta.-sheet formation between rigid-rod scaffolds. Electrospray ionization mass spectra and other results showed that, in sharp contrast to tetra-Leu 3, rigid-rod octa-Leu 2 forms stable, mainly (or even exclusively) dimeric rigid-rod .beta.-barrels with ionophoric properties, capable of mediating efficient ion transport across lipid bilayers.

IT **225656-00-8P 225656-01-9P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(self-assembled rigid-rod ionophores)

RN 225656-00-8 CAPLUS
CN Pentanamide, 2,2',2'',2''',2'''',2''''',2'''''',2''''''',2'''''''-[[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1''''''':4''''''',1'''''''-octiphenyl]-2'',2'''',2''''''',3,3',3''',3''''',3'''''',3'''''''-octayloctakis[oxy(1-oxo-2,1-ethanediyl)imino]]octakis[4-methyl-, (2S,2'S,2''S,2'''S,2''''S,2'''''S,2''''''S,2'''''''S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L12 ANSWER 23 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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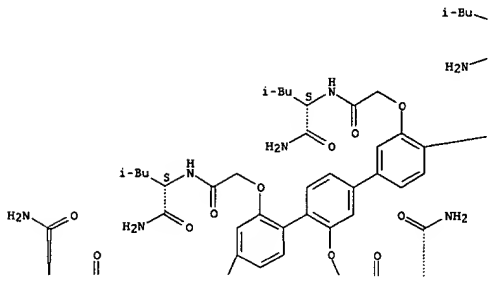

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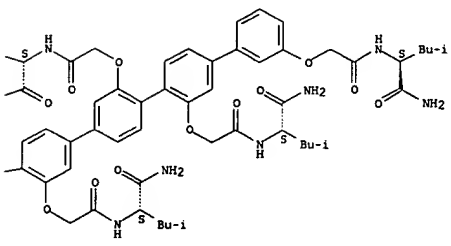

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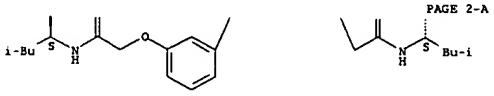
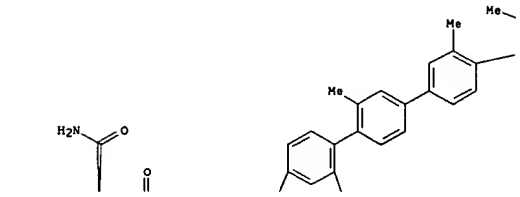


L12 ANSWER 23 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

RN 225656-01-9 CAPLUS
CN Pentanamide, 2,2',2'',2'''-[(2'',2'''',3''',3'''''-tetramethyl[1,1':4',1'':4'',1''':4''',1'''':4''''',1''''':4''''',1'''''':4''''''',1''''''':4'''''''-octiphenyl]-2'''''',3,3',3''''''-tetrayl]tetrakis[oxy(1-oxo-2,1-ethanediyl)imino]]tetrakis[4-methyl-, (2S,2'S,2''S,2'''S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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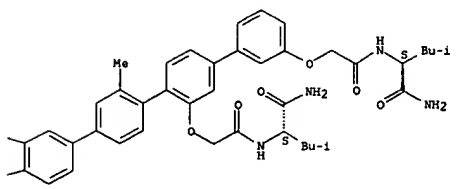

L12 ANSWER 23 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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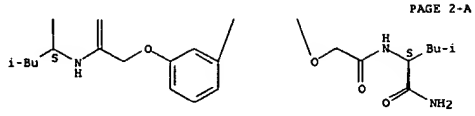
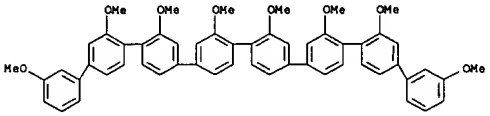
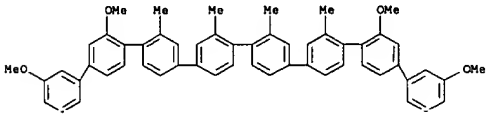


IT **195737-40-7 225656-02-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(self-assembled rigid-rod ionophores)
RN 195737-40-7 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1'''''''-Octiphenyl, 2'',2'''',2'''''',3,3',3''',3''''',3'''''''-octamethoxy- (9CI) (CA INDEX NAME)



RN 225656-02-0 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1'''''''-Octiphenyl, 2'''''',3,3',3'''''''-tetramethoxy-2'',2'''',3''',3'''''-tetramethyl- (9CI) (CA INDEX NAME)



IT **195737-45-2P 225656-03-1P 225656-04-2P**
225656-05-3P 225656-06-4P 225656-07-5P
225656-08-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(self-assembled rigid-rod ionophores)
RN 195737-45-2 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1'''''''-Octiphenyl]-2'',2'''',2'''''',3,3',3''',3''''',3'''''''-octol (9CI) (CA INDEX NAME)

L12 ANSWER 23 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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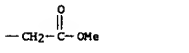

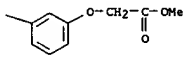

RN 225656-05-3 CAPLUS
CN Acetic acid, 2,2',2'',2'''-[(2'',2'''',3''',3'''''-tetramethyl[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1'''''''-octiphenyl]-2'''''',3,3',3'''''''-tetrayl)tetrakis(oxy)]tetrakis- (9CI) (CA INDEX NAME)

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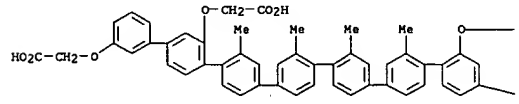

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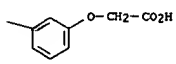
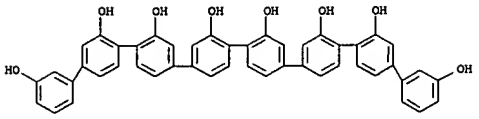
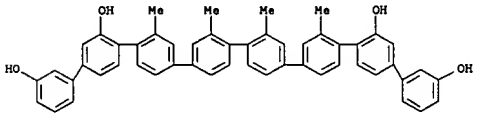


RN 225656-06-4 CAPLUS
CN Acetic acid, 2,2',2'',2''',2'''',2''''',2'''''',2'''''''-[[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1'''''''-octiphenyl]-2'',2'''',2'''''',3,3',3''',3''''',3'''''''-octayloctakis(oxy)]octakis-, octamethyl ester (9CI) (CA INDEX NAME)

L12 ANSWER 23 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)



RN 225656-03-1 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1'''''''-Octiphenyl]-2'''''',3,3',3'''''''-tetrol, 2'',2'''',3''',3'''''-tetramethyl- (9CI) (CA INDEX NAME)



RN 225656-04-2 CAPLUS
CN Acetic acid, 2,2',2'',2'''-[(2'',2'''',3''',3'''''-tetramethyl[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1'''''''-octiphenyl]-2'''''',3,3',3'''''''-tetrayl)tetrakis(oxy)]tetrakis-, tetramethyl ester (9CI) (CA INDEX NAME)

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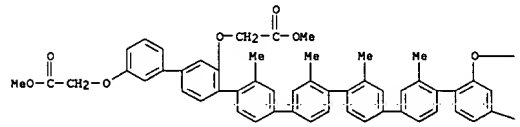

L12 ANSWER 23 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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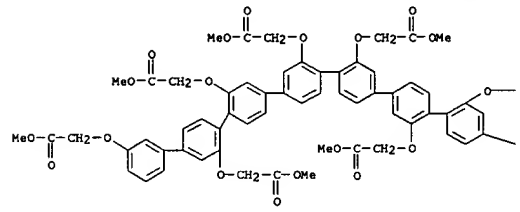

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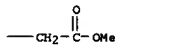

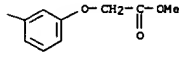

RN 225656-07-5 CAPLUS
CN Acetic acid, 2,2',2'',2''',2'''',2''''',2'''''',2'''''''-[[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1'''''''-octiphenyl]-2'',2'''',2'''''',3,3',3''',3''''',3'''''''-octayloctakis(oxy)]octakis-, octakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

L12 ANSWER 23 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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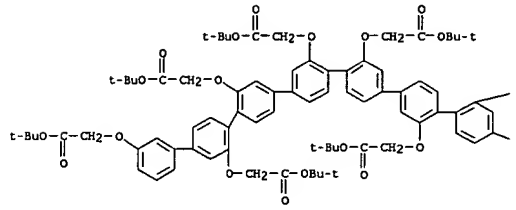

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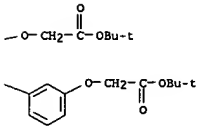
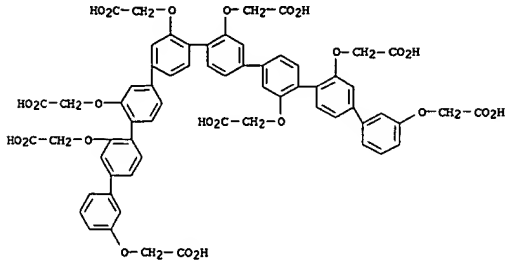


RN 225656-08-6 CAPLUS
CN Acetic acid, 2,2',2'',2''',2'''',2''''',2'''''',2''''''',2'''''''-[[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1'''''''-octiphenyl]-2'',2''',2'''''',3,3',3''',3''''',3'''''''-octayloctakis(oxy)]octakis- (9CI) (CA INDEX NAME)

L12 ANSWER 23 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)



REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 24 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:231888 CAPLUS
DOCUMENT NUMBER: 130:289054
TITLE: Organic electroluminescent device material and organic electroluminescent device with it
INVENTOR(S): Okada, Hisashi
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

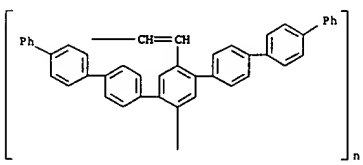
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11097175	A2	19990409	JP 1997-252502	19970917

PRIORITY APPLN. INFO.: JP 1997-252502 19970917

AB The material comprises a compd. having a repeating unit ArCR1:CR2 (Ar = arylene or arom. heterocyclic substituted with .gtoreq.2 aryl or arom. heterocyclic; R1, 2 = H, substituent). The device has a pair of electrodes sandwiching a light-emitting layer or a light-emitting layer-contg. several org. compd. thin films, in which the layer and/or the films contain the material. The device shows low voltage driving and high luminance with efficiency in repeated use.

IT **222962-75-6**
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(org. electroluminescent device contg. arom. alkene-based compd.)

RN 222962-75-6 CAPLUS
CN Poly([1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-septiphenyl]-2''',5'''-diyl-1,2-ethenediyl) (9CI) (CA INDEX NAME)



L12 ANSWER 25 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:140798 CAPLUS
DOCUMENT NUMBER: 130:293040
TITLE: Direct evidence for the importance of hydrophobic mismatch for cell membrane recognition
AUTHOR(S): Ghebremariam, Bereket; Sidorov, Vladimir; Matile, Stefan
CORPORATE SOURCE: Department of Chemistry, Georgetown University, Washington, DC, 20057-1227, USA
SOURCE: Tetrahedron Letters (1999), 40(8), 1445-1448
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB In this Letter, we describe the synthesis of amphiphilic oligo(p-phenylene)s from 31 to 44 .ANG. length and delineate the interaction of these rigid-rod mols. with lipid bilayers using fluorescence quenching methods. The results demonstrate high importance of hydrophobic mismatch for selective cell membrane recognition by rigid-rod mols.

IT **223462-81-5P 223462-82-6P 223462-83-7P**
223462-84-8P
RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
(prepn. of amphiphilic oligo(p-phenylene)s to examine the importance of hydrophobic mismatch for cell membrane recognition)

RN 223462-81-5 CAPLUS
CN Glycine, N-(carboxymethyl)-N-[2-[2-[(2',2''',2'''''',3'',3''''',3''''''-hexamethyl[1,1':4',1'':4'',1''':4''',1'''':4''',1''''':4''''',1'''''':4''''''-septiphenyl]-4-yl)oxy]ethoxy]ethoxy]ethyl]- (9CI) (CA INDEX NAME)

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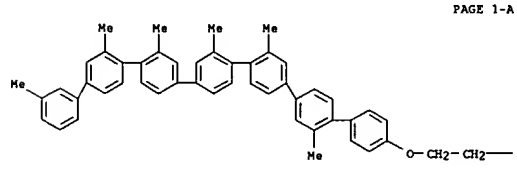

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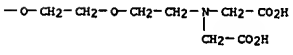

L12 ANSWER 25 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

RN 223462-82-6 CAPLUS
CN Glycine, N-(carboxymethyl)-N-[2-[2-[2-[(2',2''',2''''',2'''''',3'',3'''',3''''''-heptamethyl[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''':4'''''',1''''''':4''''''',1'''''''-octiphenyl]-4-yl)oxy]ethoxy]ethoxy]ethyl]- (9CI) (CA INDEX NAME)

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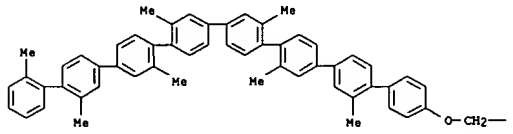

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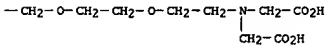

RN 223462-83-7 CAPLUS
CN Glycine, N-(carboxymethyl)-N-[2-[2-[2-[(2',2''',2''''',2'''''',3'',3'''',3''''''-octamethyl[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''':4'''''',1'''''''-noviphenyl]-4-yl)oxy]ethoxy]ethoxy]ethyl]- (9CI) (CA INDEX NAME)

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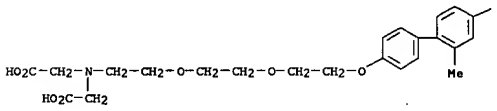
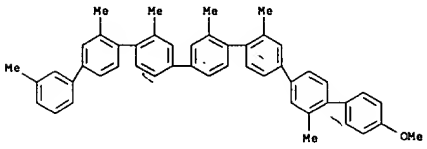


L12 ANSWER 25 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)
223462-91-7P 223462-92-8P 223462-93-9P
223462-94-0P 223462-95-1P 223462-97-3P
223462-98-4P 223462-99-5P 223463-00-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of amphiphilic oligo(p-phenylene)s to examine the importance of hydrophobic mismatch for cell membrane recognition)

RN 223462-88-2 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Septiphenyl, 4-methoxy-2',2''',2''''',3'',3'''',3''''''-hexamethyl- (9CI) (CA INDEX NAME)



RN 223462-89-3 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1'''''''':4'''''''-Noviphenyl, 4-methoxy-2',2''',2''''',2''''''',3'',3''',3''''''',3'''''''-octamethyl- (9CI) (CA INDEX NAME)

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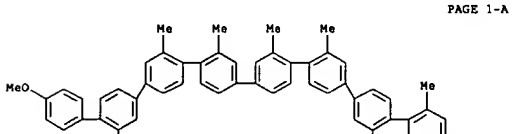

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L12 ANSWER 25 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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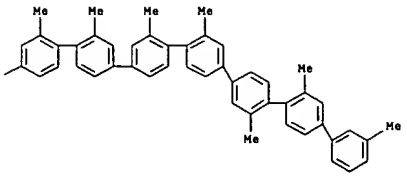

RN 223462-84-8 CAPLUS
CN Glycine, N-(carboxymethyl)-N-[2-[2-[2-[(2',2''',2''''',2''''''',2'''''''',3'',3'''',3''''''',3'''''''',3''''''''-nonamethyl[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''':4''''''',1'''''''':4'''''''',1''''''''-deciphenyl]-4-yl)oxy]ethoxy]ethoxy]ethyl]- (9CI) (CA INDEX NAME)

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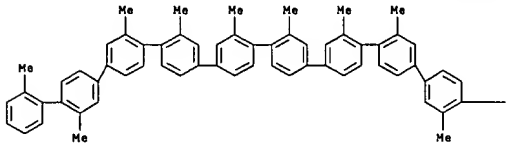

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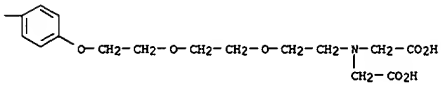
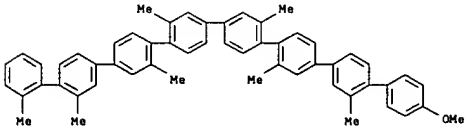


IT **223462-88-2P 223462-89-3P 223462-90-6P**

L12 ANSWER 25 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

RN 223462-90-6 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1'''''''-Octiphenyl, 4'''''''-methoxy-2,2',2''',2''''',3'',3'''',3''''''-heptamethyl- (9CI) (CA INDEX NAME)



RN 223462-91-7 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1'''''''':4'''''''',1''''''''-Deciphenyl, 4-methoxy-2,2',2''',2''''',2''''''',3'',3'''',3''''''',3'''''''-nonamethyl- (9CI) (CA INDEX NAME)

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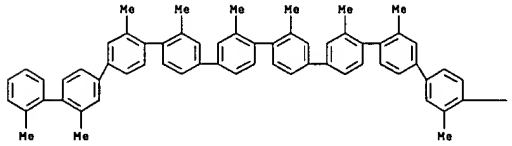

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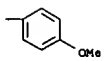
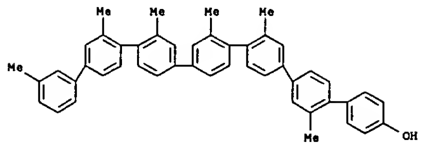


RN 223462-92-9 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Septiphenyl]-4-ol, 2',2''',2''''',3'',3'''',3''''''-hexamethyl- (9CI) (CA INDEX NAME)



RN 223462-93-9 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1''''''':4''''''',1''''''''-Noviphenyl]-4-ol, 2',2''',2''''',2''''''',3'',3'''',3'''''',3''''''''-octamethyl- (9CI) (CA INDEX NAME)

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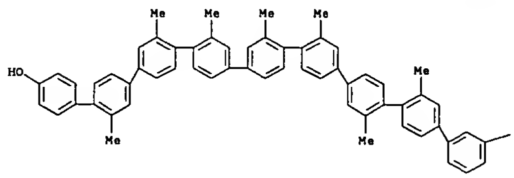

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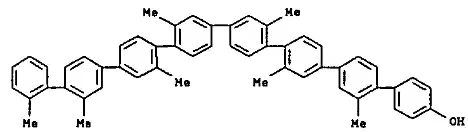
RN 223462-94-0 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1'''''''-Octiphenyl]-4-ol, 2',2''',2''''',2''''''',3'',3'''',3''''''-heptamethyl- (9CI) (CA INDEX NAME)

L12 ANSWER 25 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)



RN 223462-95-1 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1''''''':4''''''',1'''''''':4'''''''',1'''''''''-Deciphenyl]-4-ol, 2',2''',2''''',2''''''',2''''''''',3'',3'''',3'''''',3''''''''-nonamethyl- (9CI) (CA INDEX NAME)

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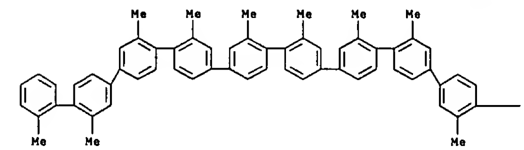
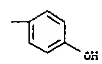


PAGE 1-B



RN 223462-97-3 CAPLUS
CN Glycine, N-(2-ethoxy-2-oxoethyl)-N-[2-[2-[2-[(2',2''',2''''',3'',3'''',3''''''-hexamethyl[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''-septiphenyl]-4-yl)oxy]ethoxy]ethoxy]ethyl]-, ethyl ester (9CI) (CA INDEX NAME)

L12 ANSWER 25 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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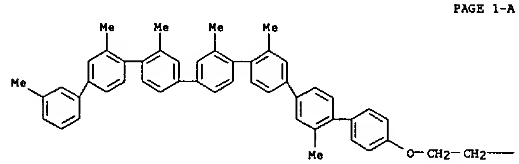
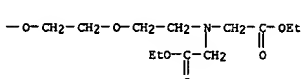
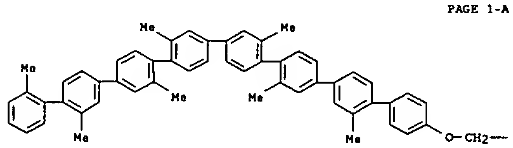


PAGE 1-B



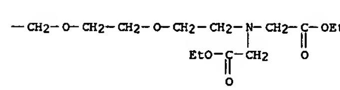
RN 223462-98-4 CAPLUS
CN Glycine, N-(2-ethoxy-2-oxoethyl)-N-[2-[2-[2-[(2',2''',2''''',2''''''',3'',3'''',3''''''-heptamethyl[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1'''''''-octiphenyl]-4-yl)oxy]ethoxy]ethoxy]ethyl]-, ethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



L12 ANSWER 25 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

PAGE 1-B



RN 223462-99-5 CAPLUS
CN Glycine, N-(2-ethoxy-2-oxoethyl)-N-[2-[2-[2-[(2',2''',2''''',2''''''',3'',3'''',3'''''',3''''''''-octamethyl[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1''''''':4''''''',1''''''''-noviphenyl]-4-yl)oxy]ethoxy]ethoxy]ethyl]-, ethyl ester (9CI) (CA INDEX NAME)

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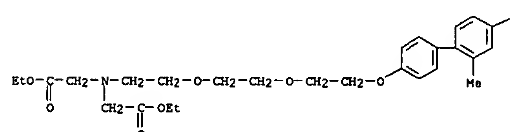
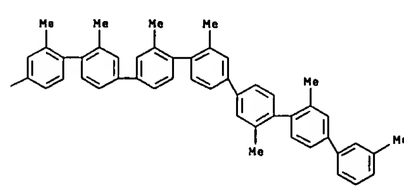


PAGE 1-B



RN 223463-00-1 CAPLUS

L12 ANSWER 25 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)
CN Glycine, N-(2-ethoxy-2-oxoethyl)-N-[2-[2-[2-[(2',2''',2'''''',2''''''',2'''''''',3'',3'''',3''''''',3'''''''',3''''''''-nonamethyl[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1''''''':4''''''',1'''''''':4''''''',1''''''''-deciphenyl]-4-yl)oxy]ethoxy]ethoxy]ethyl]-, ethyl ester (9CI) (CA INDEX NAME)

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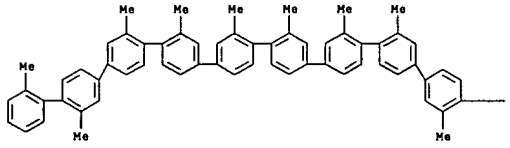

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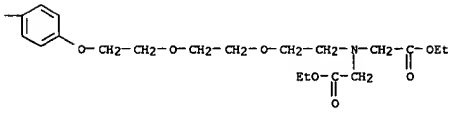

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 26 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:122589 CAPLUS
DOCUMENT NUMBER: 130:215677
TITLE: Interface morphology in organic light-emitting diodes
AUTHOR(S): Goncalves-Conto, Sylvie; Carrard, Michel; Si-Ahmed, Lynda; Zuppiroli, Libero
CORPORATE SOURCE: Laboratoire Physique Solides Semicristallins, Departement Physique, Ecole Polytechnique Federale Lausanne, Lausanne, CH-1015, Switz.
SOURCE: Advanced Materials (Weinheim, Germany) (1999), 11(2), 112-115
CODEN: ADVMEW; ISSN: 0935-9648
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English
AB To study the interface morphol. of org. light-emitting diodes (LEDs), 2 model systems were chosen: the classical hole-transporting material N,N'-diphenyl-N,N'-bis(3-methylphenyl)[1,1'-biphenyl]-4,4'-diamine (TPD) and a carbazole, N,N'-diethyl-3,3'-bicarbazyl (EtCz)2. Films were vapor-deposited on glass substrates coated with ITO and the surface morphol. was studied by SEM and TEM. The surface morphol. of the vapor-deposited org. films depended on the wetting properties of the org. material constituting the diode and on the diffusion coeff. of the mols. on the surface. A derivatization of the ITO surface with a self-assembled monolayer of an appropriate mol., e.g. N,N'-dipentyl-(5,5'-dicarboxy)-3,3'-bicarbazyl, largely improved the interface morphol. of the (EtCz)2 films.
IT 221018-07-1
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses) (self-assembled monolayer; interface morphol. in org. LEDs between hole transport layers and bare ITO substrates as well as surface-modified ones by self-assembled monolayers)
RN 221018-07-1 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1''''''':4'''''''',1'''''''':4''''''''-Deciphenyl]-4-butanoic acid, 4''''''''-(2-methylpropyl)-.gamma.-oxo- (9CI) (CA INDEX NAME)

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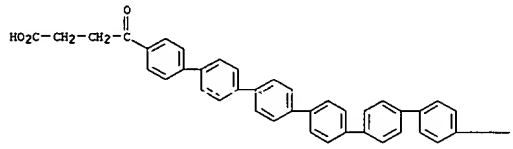

L12 ANSWER 26 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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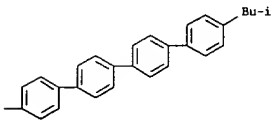

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 27 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:710087 CAPLUS
DOCUMENT NUMBER: 130:77548
TITLE: Voltage-dependent ion channel formation by rigid rod-shaped polyols in planar lipid bilayers
AUTHOR(S): Sakai, Naomi; Ni, Chiyou; Bezrukov, Sergey M.; Matile, Stefan
CORPORATE SOURCE: Department of Chemistry, Georgetown University, Washington, DC, 20057, USA
SOURCE: Bioorganic & Medicinal Chemistry Letters (1998), 8(19), 2743-2746
CODEN: BMCLE8; ISSN: 0960-894X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The authors describe the appearance of large, voltage-dependent currents in BLM induced by rigid rod-shaped polyols that function without charge and permanent dipole moment. The capacity of these sym., non-peptide models to form either short-living nanopores or small ion channels is shown to depend critically on the length of rigid-rod scaffold as well as the nature of the lateral side chains.
IT 201218-73-7 218447-12-2 218447-13-3
RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process) (voltage-dependent ion channel formation by rigid rod-shaped polyols in planar lipid bilayers)
RN 201218-73-7 CAPLUS
CN 1,2-Propanediol, 3,3',3'',3''',3'''',3''''',3'''''',3'''''''-[[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1''''''':4'''''''',1''''''''-octiphenyl]-2'',2''''',2''''''',3,3',3''',3''''',3'''''''-octayloctakis(oxy)]octakis-, (all-R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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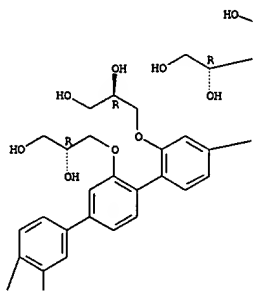

L12 ANSWER 27 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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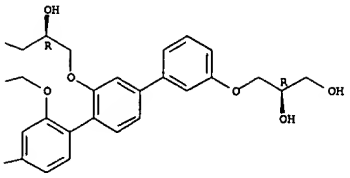

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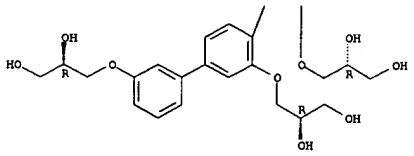

RN 218447-12-2 CAPLUS
CN 1,2-Pentanediol, 5,5',5'',5''',5'''',5''''',5'''''',5''''''',5'''''''-[[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1''''''':4''''''',1'''''''-octiphenyl]-2'',2'''',2''''''',3,3',3''',3''''',3'''''''-octayloctakis(oxy)]octakis-, (2R,2'R,2''R,2'''R,2''''R,2'''''R,2''''''R,2'''''''R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L12 ANSWER 27 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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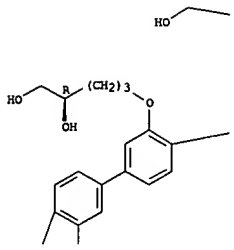
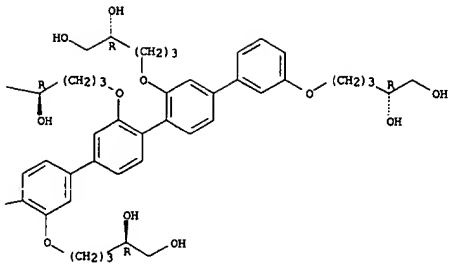
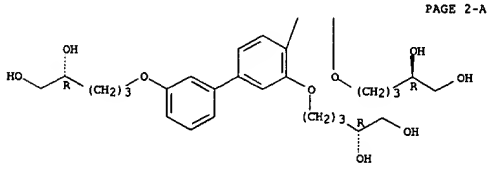


PAGE 1-B



L12 ANSWER 27 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

PAGE 2-A



RN 218447-13-3 CAPLUS
CN 2,3-Hexanediol, 1,1',1'',1''',1'''',1''''',1'''''',1''''''',1'''''''-[[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1''''''':4'''''''-octiphenyl]-2'',2'''',2''''''',3,3',3''',3''''',3'''''''-octayloctakis(oxy)]octakis- (9CI) (CA INDEX NAME)

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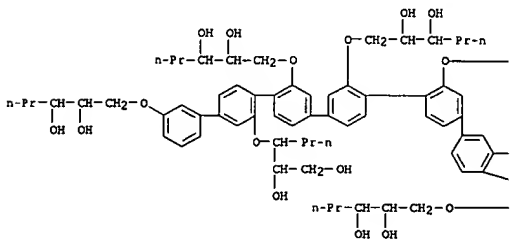

L12 ANSWER 27 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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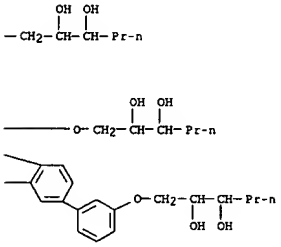

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 28 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:566204 CAPLUS
DOCUMENT NUMBER: 129:245608
TITLE: Synthesis and material properties of soluble poly(1,1'-ferrocenylene-alt-p-oligophenylenes)
AUTHOR(S): Knapp, Ralf; Velten, Ulf; Rehahn, Matthias
CORPORATE SOURCE: Polymer-Institut, Universitat Karlsruhe, Karlsruhe, D-76128, Germany
SOURCE: Polymer (1998), 39(23), 5827-5838
CODEN: POLMAG; ISSN: 0032-3861
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A series of poly(1,1'-ferrocenylene-alt-p-oligophenylenes) was prepd. via Pd-catalyzed polycondensation, i.e., poly(1,1'-ferrocenylene-alt-p-terphenyl-4,4'''-ylene), poly(1,1'-ferrocenylene-alt-p-quinquephenyl-4,4''''-ylene), and poly(1,1'-ferrocenylene-alt-p-septiphenyl-4,4'''''-ylene), which bear two solubilizing n-hexyl or n-dodecyl side chains at every repeating unit. The homogeneous constitution of all sol. polymers was proved using high-resoln. 1H and 13C NMR spectroscopy, and the d.p. were shown to vary from Pn = 15 to 55. The material properties of the poly(1,1'-ferrocenylene-alt-p-oligophenylenes) were analyzed in bulk and soln. using TGA, DSC, WAXS, GPC, viscosimetry and light scattering. Some of the results are contrasted with those of measurements on poly(p-phenylene) and poly[2,9-(o-phenanthroline)-alt-p-oligophenylene] ref. polymers showing that the main chains of the poly(1,1'-ferrocenylene-alt-p-oligophenylenes) are by no means rodlike, like those of the poly(p-phenylenes) but assume randomly coiled conformations. However, the coils are less densely packed and significantly more flexible than those of the poly[2,9-(o-phenanthroline)-alt-p-oligophenylenes].

IT **213251-77-5P 213251-80-0P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and material properties of)

RN 213251-77-5 CAPLUS
CN Poly[1,1'-ferrocenediyl(2''',5'''-dihexyl[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-septiphenyl]-4,4''''''-diyl)] (9CI) (CA INDEX NAME)

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

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* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

L12 ANSWER 28 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

RN 213251-80-0 CAPLUS
CN Poly[1,1'-ferrocenediyl(2''',5'''-didodecyl[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''-septiphenyl]-4,4''''''-diyl)] (9CI) (CA INDEX NAME)

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

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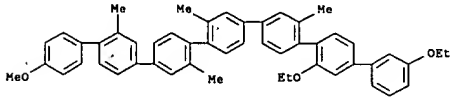
REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 29 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:454028 CAPLUS
DOCUMENT NUMBER: 129:175411
TITLE: Synthesis of asymmetric septi(p-phenylene)s
AUTHOR(S): Ghebremariam, Bereket; Matile, Stefan
CORPORATE SOURCE: Department of Chemistry, Georgetown University, Washington, DC, 20057-1227, USA
SOURCE: Tetrahedron Letters (1998), 39(30), 5335-5338
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

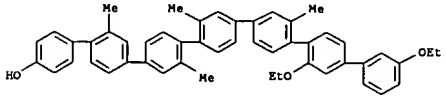
AB The synthesis of two amphiphilic septi(p-phenylene)s is described. One terminus of each rigid-rod scaffold is linked through a spacer to a hydrophilic IDA-subunit; the two benzenes at the other terminus carry hydrophobic substituents of different size. These synthetic receptor models are expected to mimic biol. processes that occur at cell membranes.

IT **211382-20-6P 211382-21-7P 211382-23-9P**
211382-25-1P 211382-26-2P 211382-27-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of asym. septi(p-phenylene)s)

RN 211382-20-6 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Septiphenyl, 2''''',3''''''-diethoxy-4-methoxy-2',2''',3'',3''''-tetramethyl- (9CI) (CA INDEX NAME)



RN 211382-21-7 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Septiphenyl]-4-ol, 2''''',3''''''-diethoxy-2',2''',3'',3''''-tetramethyl- (9CI) (CA INDEX NAME)



RN 211382-23-9 CAPLUS
CN Glycine, N-[2-[2-[2-[(2''''',3''''''-diethoxy-2',2''',3'',3''''-tetramethyl[1,1':4',1'':4'',1''':4''',1'''':4''''',1''''':4''''''-septiphenyl]-4-yl)oxy]ethoxy]ethoxy]ethyl]-N-(2-ethoxy-2-oxoethyl)-, ethyl ester (9CI) (CA INDEX NAME)

L12 ANSWER 29 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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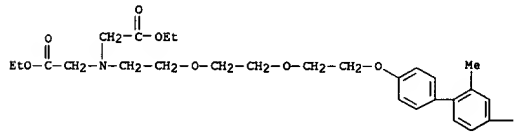
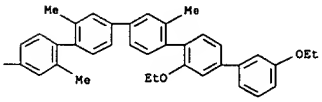
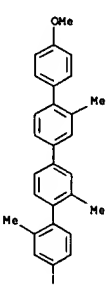


PAGE 1-B



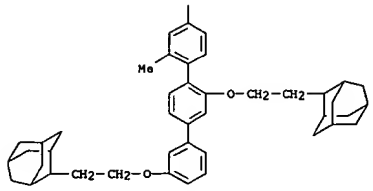
RN 211382-25-1 CAPLUS
CN Tricyclo[3.3.1.13,7]decane, 2,2'-[[4-(4''''-methoxy-2'',3,3',3'''-tetramethyl[1,1':4',1'':4'',1'''-quaterphenyl]-4-yl)[1,1'-biphenyl]-3,3'-diyl]bis(oxy-2,1-ethanediyl)]bis- (9CI) (CA INDEX NAME)

PAGE 1-A



L12 ANSWER 29 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

PAGE 2-A



RN 211382-26-2 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Septiphenyl]-4-ol, 2',2''',3'',3''''-tetramethyl-2''''',3''''''-bis(2-tricyclo[3.3.1.13,7]dec-2-ylethoxy)- (9CI) (CA INDEX NAME)

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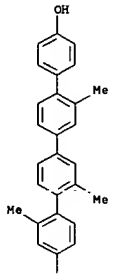
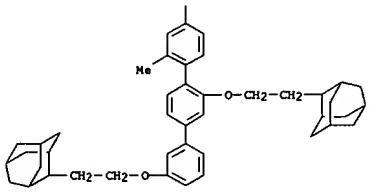


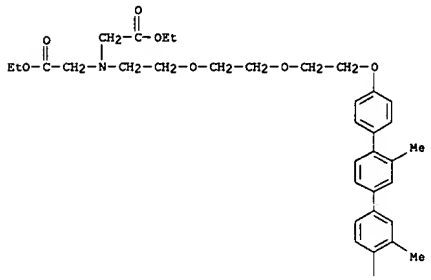
L12 ANSWER 29 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

PAGE 2-A



RN 211382-27-3 CAPLUS
CN Glycine, N-(2-ethoxy-2-oxoethyl)-N-[2-[2-[2-[[2',2''',3'',3''''-tetramethyl-2''''',3''''''-bis(2-tricyclo[3.3.1.13,7]dec-2-ylethoxy)[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''-septiphenyl]-4-yl]oxy]ethoxy]ethoxy]ethyl]-, ethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



L12 ANSWER 29 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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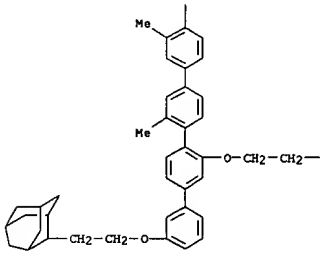

PAGE 2-B

IT 211382-14-8P 211382-15-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of asym. septi(p-phenylene)s)
RN 211382-14-8 CAPLUS
CN Glycine, N-(carboxymethyl)-N-[2-[2-[2-[(2''''',3''''''-diethoxy-2',2''',3'',3''''-tetramethyl[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''-septiphenyl]-4-yl]oxy]ethoxy]ethoxy]ethyl]- (9CI) (CA INDEX NAME)

L12 ANSWER 29 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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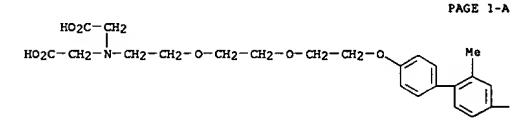
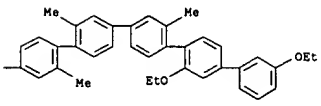
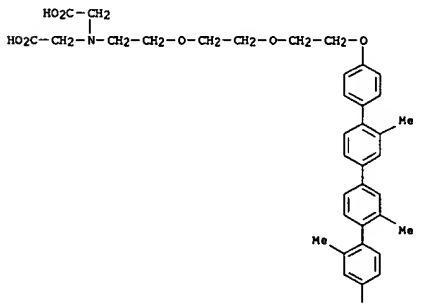


PAGE 1-B



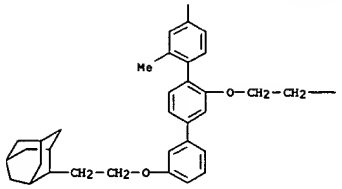
RN 211382-15-9 CAPLUS
CN Glycine, N-(carboxymethyl)-N-[2-[2-[2-[(2',2''',3'',3''''-tetramethyl-2''''',3''''''-bis(2-tricyclo[3.3.1.13,7]dec-2-ylethoxy)[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''-septiphenyl]-4-yl]oxy]ethoxy]ethoxy]ethyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



L12 ANSWER 29 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

PAGE 2-A



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REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 30 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1998:270070 CAPLUS
DOCUMENT NUMBER: 129:37806
TITLE: Side-chain hydrophobicity controls the activity of proton channel forming rigid rod-shaped polyols
AUTHOR(S): Ni, Chiyou; Matile, Stefan
CORPORATE SOURCE: Dep. Chem., Georgetown Univ., Washington, DC, 20057-1227, USA
SOURCE: Chemical Communications (Cambridge) (1998), (7), 755-756
CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Increased activity, facile incorporation into lipid bilayers and intact active structure and transport selectivity are the consequences of modifications of the side-chain hydrophobicity of a proton channel-forming octa(p-phenylene).

IT **195737-38-3**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(prepn. of modified p-phenylene and demonstration that side-chain hydrophobicity controls activity of proton channel forming rigid rod-shaped polyols)

RN 195737-38-3 CAPLUS
CN 1,2-Propanediol, 3,3',3'',3''',3'''',3''''',3''''''-[[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''-4''''''-octiphenyl]-2'',2''''',2''''''-diyl]tris(oxy)]octakis- (9CI) (CA INDEX NAME)

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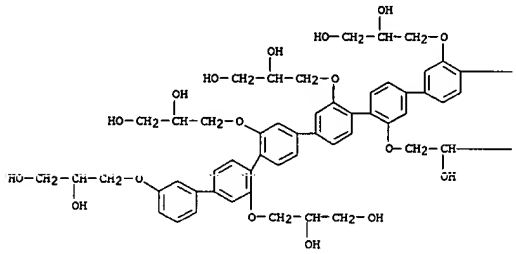

L12 ANSWER 30 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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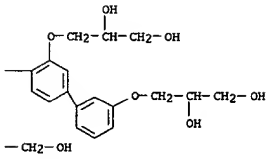

IT **208453-38-7P 218447-13-3P**
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(prepn. of modified p-phenylene and demonstration that side-chain hydrophobicity controls activity of proton channel forming rigid rod-shaped polyols)

RN 208453-38-7 CAPLUS
CN 1,2-Pentanediol, 5,5',5'',5''',5'''',5''''',5''''''-[[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''-4''''''-octiphenyl]-2'',2''''',2''''''-diyl]tris(oxy)]octakis-, (2S,2'S,2''S,2'''S,2''''S,2'''''S,2''''''S,2''''''S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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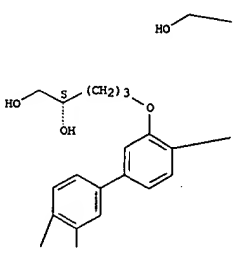

L12 ANSWER 30 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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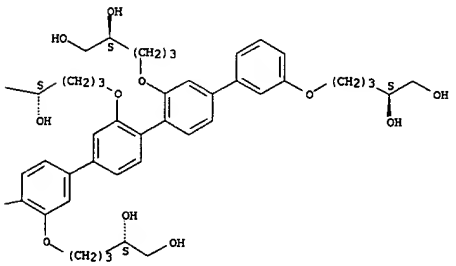

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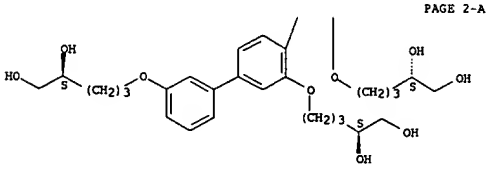
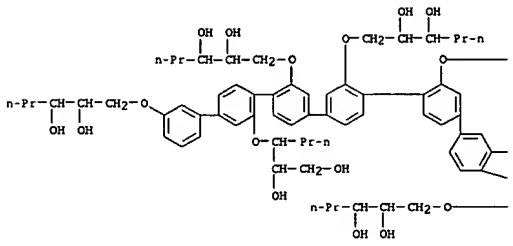


RN 218447-13-3 CAPLUS
CN 2,3-Hexanediol, 1,1',1'',1''',1'''',1''''',1''''''-[[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''-4''''''-octiphenyl]-2'',2''''',2''''''-diyl]tris(oxy)]octakis- (9CI) (CA INDEX NAME)

L12 ANSWER 30 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

PAGE 1-A



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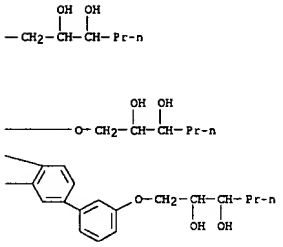
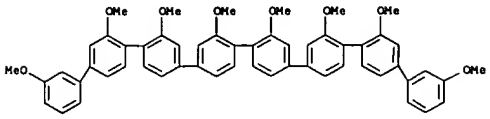


IT **195737-40-7P 208453-42-3P 208453-43-4P**
RL: ACT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of modified p-phenylene and demonstration that side-chain hydrophobicity controls activity of proton channel forming rigid rod-shaped polyols)

RN 195737-40-7 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1''''''-Octiphenyl, 2'',2'''',2''''''',3,3',3''',3''''',3'''''''-octamethoxy- (9CI) (CA INDEX NAME)

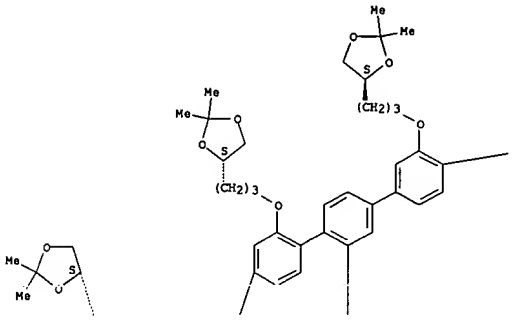
L12 ANSWER 30 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)



RN 208453-42-3 CAPLUS
CN 1,3-Dioxolane, 4,4',4'',4''',4'''',4''''',4'''''',4'''''''-[[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1''''''-octiphenyl]-2'',2''''',2''''''',3,3',3''',3''''',3'''''''-octayloctakis(oxy-3,1-propanediyl)]octakis[2,2-dimethyl-, (4S,4'S,4''S,4'''S,4''''S,4'''''S,4''''''S,4'''''''S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



L12 ANSWER 30 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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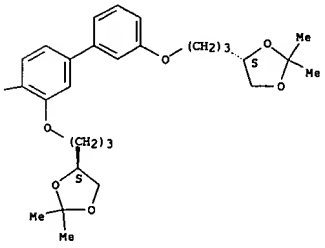

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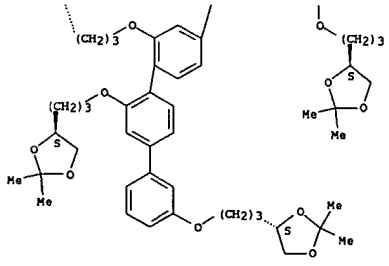

RN 208453-43-4 CAPLUS
CN 1,3-Dioxolane, 4,4',4'',4''',4'''',4''''',4'''''',4'''''''-[[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1''''''-octiphenyl]-2'',2''''',2''''''',3,3',3''',3''''',3'''''''-octayloctakis(oxymethylene)]octakis[2,2-dimethyl-5-propyl- (9CI) (CA INDEX NAME)

L12 ANSWER 30 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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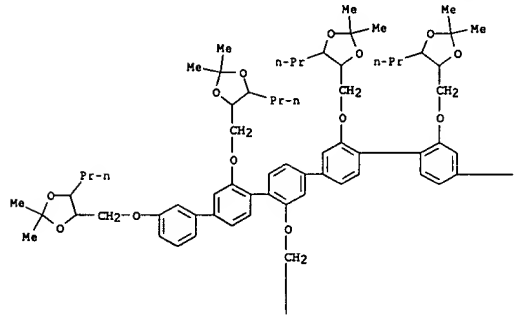

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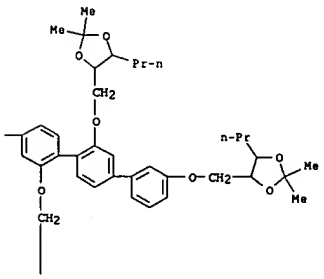

L12 ANSWER 30 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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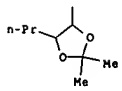

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PAGE 2-B

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 31 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1998:6517 CAPLUS
DOCUMENT NUMBER: 128:99011
TITLE: Rigid Rod-Shaped Polyols: Functional Nonpeptide Models for Transmembrane Proton Channels
AUTHOR(S): Weiss, Linnea A.; Sakai, Naomi; Ghebremariam, Bereket; Ni, Chiyou; Matile, Stefan
CORPORATE SOURCE: Department of Chemistry, Georgetown University, Washington, DC, 20057-1227, USA
SOURCE: Journal of the American Chemical Society (1997), 119(50), 12142-12149
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The present study concerns the mode of action of a rigid rod-shaped polyol I and the corresponding hexamer II. Proton flux mediated by I is shown to be strongly favored over metal cations and anions. The modest selectivity for monovalent cations (Rb+ > Cs+ > K+ > Na+ .apprxeq. Li+, Eisenman sequence II) is detd. by the dehydration energy and is weakly influenced by the local elec. (ionophoric) field. The induction of membrane defects was ruled out by the absence of dye leakage. Structural studies by CD and fluorescence spectroscopy imply that I aggregates in polar and nonpolar solvents, but not in lipid bilayers. Furthermore, it is shown that a very small fraction of I adopts a monomeric transmembrane tunnel-like structure which accounts for activity, while the remainder forms inactive self-assemblies. The above results suggest that I acts as a functional unimol. proton wire which mimics the hydrogen-bonded chain mechanism found in bioenergetic systems.

IT **195737-38-3 201218-73-7**
RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)
(rigid rod-shaped polyols as functional nonpeptide models for transmembrane proton channels)

RN 195737-38-3 CAPLUS
CN 1,2-Propanediol, 3,3',3'',3''',3'''',3''''',3'''''',3'''''''-[[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1'''''''-octiphenyl]-2'',2'''',2''''''',3,3',3''',3''''',3'''''''-octayloctakis(oxy)]octakis- (9CI) (CA INDEX NAME)

L12 ANSWER 31 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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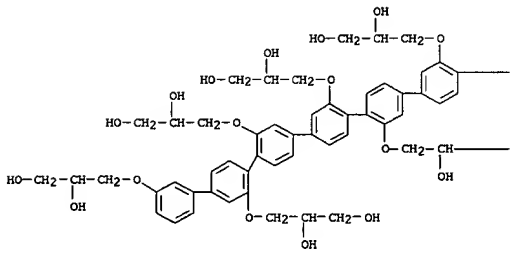

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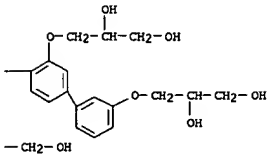

RN 201218-73-7 CAPLUS
CN 1,2-Propanediol, 3,3',3'',3''',3'''',3''''',3'''''',3'''''''-[[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1'''''''-octiphenyl]-2'',2'''',2''''''',3,3',3''',3''''',3'''''''-octayloctakis(oxy)]octakis-, (all-R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L12 ANSWER 31 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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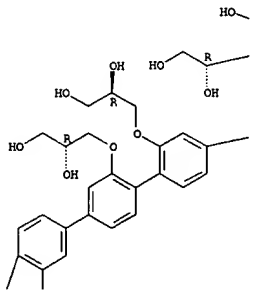

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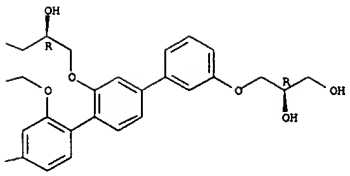
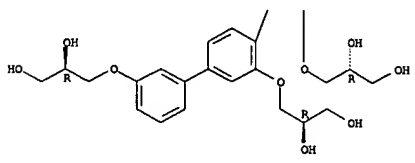


PAGE 2-A



L12 ANSWER 31 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

REFERENCE COUNT: 92 THERE ARE 92 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 32 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1997:730897 CAPLUS
DOCUMENT NUMBER: 127:346717
TITLE: Suzuki polycondensation: on catalyst derived phosphorus incorporation and reproducibility of molecular weights
AUTHOR(S): Frahn, Jorg; Karakaya, Birol; Schafer, Andreas; Schluter, A.-Dieter
CORPORATE SOURCE: Freie Univ. Berlin, Inst Organ. Chem., Berlin, D-14195, Germany
SOURCE: Tetrahedron (1997), 53(45), 15459-15467
CODEN: TETRAB; ISSN: 0040-4020
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

AB This paper describes the quantification of the extent to which phosphorus is incorporated into polymer backbones during Suzuki polycondensation and gives details on how this step-growth polym. is best performed to ensure reproducible results specifically regarding the achievable mol. wts.

IT **198289-15-5**
RL: PRP (Properties)
(model compd. for polymers obtained by Suzuki polycondensation)

RN 198289-15-5 CAPLUS

CN Phosphine oxide, bis(4'''''''-bromo-2',2''',2''''',2''''''',5',5''',5''''',5''''''',5'''''''-octahexyl[1,1':4',1''':4'',1''':4''',1''''':4'''',1''''':4''''',1'''''':4''''''',1'''''''-octiphenyl]-4-yl)phenyl- (9CI) (CA INDEX NAME)

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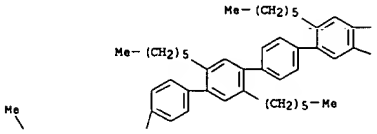
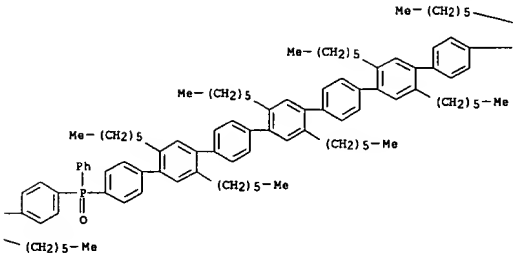


PAGE 1-B



L12 ANSWER 32 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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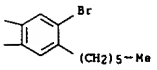
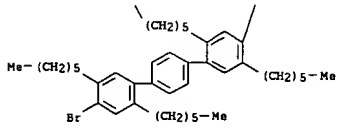
PAGE 1-C



PAGE 2-A



IT **198289-11-1P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(model compd.; model compd. for polymers obtained by Suzuki polycondensation)

RN 198289-11-1 CAPLUS

CN Phosphine oxide, (2,2'',2'''',2''''''',5,5'',5'''',5''''''-octahexyl[1,1':4',1'':4'',1''':4''',1''''':4'''',1''''':4''''',1'''''':4''''''',1'''''''-octiphenyl]-4-yl)diphenyl- (9CI) (CA INDEX NAME)

L12 ANSWER 32 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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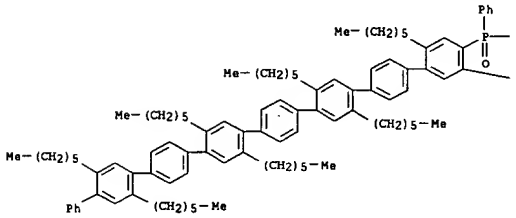
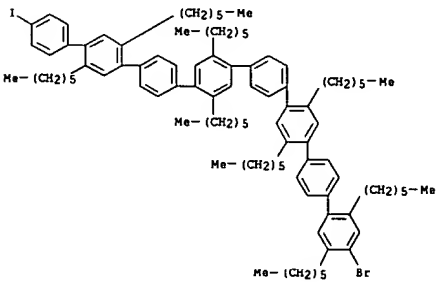


PAGE 1-B

IT **198289-16-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with chlorodiphenyl phosphine)

RN 198289-16-6 CAPLUS

CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Octiphenyl, 4-bromo-2,2'',2'''',2''''''-5,5'',5'''',5''''''-octahexyl-4'''''''-iodo- (9CI) (CA INDEX NAME)



L12 ANSWER 32 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

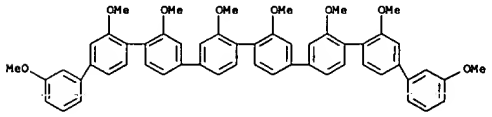
L12 ANSWER 33 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1997:603408 CAPLUS
DOCUMENT NUMBER: 127:244487
TITLE: Toward Biomimetic Ion Channels Formed by Rigid-Rod Molecules: Length-Dependent Ion-Transport Activity of Substituted Oligo(p-Phenylene)s
AUTHOR(S): Sakai, Naomi; Brennan, Kevin C.; Weiss, Linnea A.; Matile, Stefan
CORPORATE SOURCE: Department of Chemistry, Georgetown University, Washington, DC, 20057-1227, USA
SOURCE: Journal of the American Chemical Society (1997), 119(37), 8726-8727
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The present study describes the synthesis of tetra-, hexa-, and octa(p-phenylene)s I, II, III which carry hydrophilic glycerol substituents along their skeleton. The transmembrane ion transport activity of octamer III having a length of 34 .ANG. which nearly matches the thickness of the hydrophobic part of an egg yolk phosphatidylcholine bilayer (36 .ANG.), exceeds that of hexamer II (26 .ANG.) by a factor of 3.0, while the tetramer I (17 .ANG.) is almost inactive. The corresponding octaanisol and octaphenol were completely inactive; the isopropylideneglycerol substituted octa(p-phenylene) analog had minor activity comparable to tetramer I.

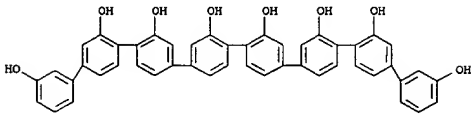
IT **195737-40-7P 195737-45-2P 195737-48-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(toward biomimetic ion channels formed by rigid-rod mols., length-dependent ion-transport activity of substituted oligo(p-phenylene)s and their prepn.)

RN 195737-40-7 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1''''''':4'''''''-Octiphenyl, 2'',2'''',2''''''',3,3',3''',3''''',3'''''''-octamethoxy- (9CI) (CA INDEX NAME)



RN 195737-45-2 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1''''''':4'''''''-Octiphenyl]-2'',2'''',2''''''',3,3',3''',3''''',3'''''''-octol (9CI) (CA INDEX NAME)

L12 ANSWER 33 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)



RN 195737-48-5 CAPLUS
CN 1,3-Dioxolane, 4,4',4'',4''',4'''',4''''',4'''''',4'''''''-[[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1''''''':4'''''''-octiphenyl]-2'',2'''',2''''''',3,3',3''',3''''',3'''''''-octayloctakis(oxymethylene)]octakis[2,2-dimethyl- (9CI) (CA INDEX NAME)

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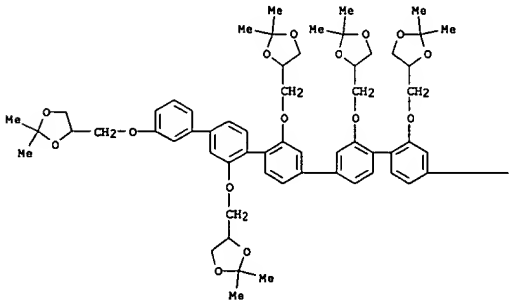
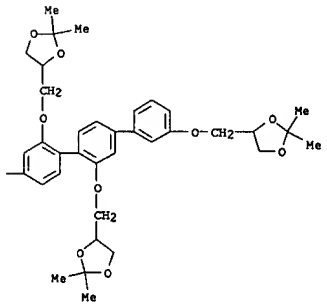


L12 ANSWER 33 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

PAGE 1-B



IT **195737-38-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(toward biomimetic ion channels formed by rigid-rod mols., length-dependent ion-transport activity of substituted oligo(p-phenylene)s and their prepn.)

RN 195737-38-3 CAPLUS
CN 1,2-Propanediol, 3,3',3'',3''',3'''',3''''',3'''''',3'''''''-[[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1''''''':4'''''''-octiphenyl]-2'',2'''',2''''''',3,3',3''',3''''',3'''''''-octayloctakis(oxy)]octakis- (9CI) (CA INDEX NAME)

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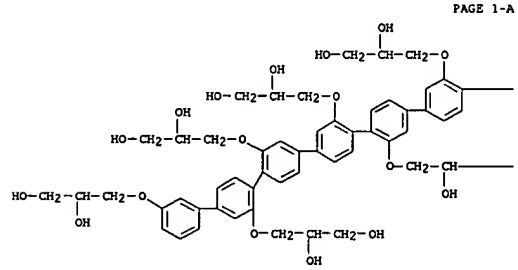

L12 ANSWER 33 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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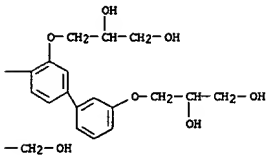

L12 ANSWER 34 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1997:594024 CAPLUS
DOCUMENT NUMBER: 127:278055
TITLE: From hexa-peri-hexabenzocoronene to "superacenes"
AUTHOR(S): Iyer, Vivekanantan S.; Wehmeier, Mike; Brand, J. Diedrich; Keegstra, Menno A.; Mullen, Klaus
CORPORATE SOURCE: Max-Planck-Institute fur Polymerforschung, Mainz, D-55128, Germany
SOURCE: Angewandte Chemie, International Edition in English (1997), 36(15), 1604-1607
CODEN: ACIEAY; ISSN: 0570-0833
PUBLISHER: Wiley-VCH
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 127:278055

AB The polyphenylene I was prepd. and characterized. Intramol. cyclodehydration of I with AlCl3 and copper triflate in CS2 afforded a black solid, which gave a broad mass spectral peak in the mass range expected for the analogous C222 graphite unit.

IT **196505-80-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of superacenes)

RN 196505-80-3 CAPLUS

CN 1,1':2',1'':4'',1''':2''',1'''':4'''',1''''':2''''',1'''''':Septiphenyl, 3''''',4',4'''''',5',5''''''',6'-hexaphenyl-3''',4''',5''',6'''-tetrakis(3',4',5'-triphenyl[1,1':2',1''-terphenyl]-4-yl)- (9CI) (CA INDEX NAME)

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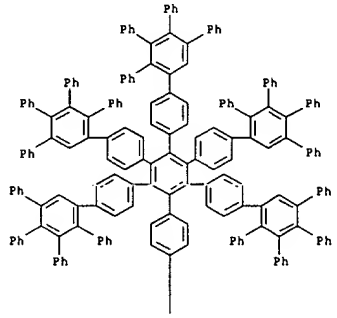

L12 ANSWER 34 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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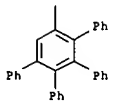


L12 ANSWER 35 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN

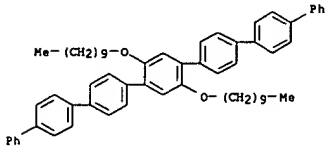
ACCESSION NUMBER: 1997:289354 CAPLUS
DOCUMENT NUMBER: 126:346244
TITLE: Third-order optical nonlinearity studies of p-heptaphenyl derivatives-doped sol-gel processed composite glass and THF solution by degenerate four-wave mixing and optical Kerr gate measurements
AUTHOR(S): Gvishi, R.; Prasad, P.N.; Reinhardt, B.A.; Bhatt, J.C.
CORPORATE SOURCE: Photonics Research Laboratory, Department of Chemistry, State University of New York, Buffalo, NY, 14260-3000, USA
SOURCE: Journal of Sol-Gel Science and Technology (1997), 9(2), 157-167
CODEN: JSGTEC; ISSN: 0928-0707
PUBLISHER: Kluwer
DOCUMENT TYPE: Journal
LANGUAGE: English

AB We have investigated the nonlinear optical performance of new UV photostable dyes, didecyl and didecyloxy substituted para-polyphenyl heptamers (DDPPH and DDOPPH hereafter, resp.) using the techniques of degenerate four-wave mixing (DFWM) and optical Kerr gate (OKG). The studies were performed on the dyes dissolved in THF soln. and doped in sol-gel processed composite-glass. The magnitudes and the signs of the real and the imaginary components of the complex third-order optical susceptibilities were detd. by the heterodyned OKG method and compared to the values obtained from concn. dependent homodyne Kerr gate and DFWM measurements. The obsd. effective second hyperpolarizability .gamma. values are dependent on the optical intensity and the pulse width of the pumping source beam. Doping of the dyes in composite-glass allows to increase the interaction length providing the prospect of using them as building blocks for photonic devices.

IT **137068-11-2**, Didecyloxy p-polyphenyl heptamer **165330-09-6**, Didecyl p-polyphenyl heptamer
RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(UV dyes; third-order optical nonlinearity studies of p-heptaphenyl derivs.-doped sol-gel processed composite glass and THF soln. by degenerate four-wave mixing and optical Kerr gate measurements)

RN 137068-11-2 CAPLUS

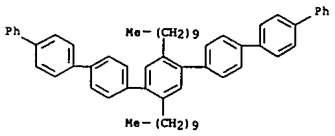
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':Septiphenyl, 2''',5'''-bis(decyloxy)- (9CI) (CA INDEX NAME)



RN 165330-09-6 CAPLUS

CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':Septiphenyl, 2''',5'''-didecyl- (9CI) (CA INDEX NAME)

L12 ANSWER 35 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)



L12 ANSWER 36 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1997:251939 CAPLUS
DOCUMENT NUMBER: 126:343948
TITLE: Polyphenylene dendrimers: from three-dimensional to two-dimensional structures
AUTHOR(S): Morgenroth, Frank; Reuther, Erik; Muellen, Klaus
CORPORATE SOURCE: Max-Planck-Inst. Polymerforschung, Mainz, D-55128, Germany
SOURCE: Angewandte Chemie, International Edition in English (1997), 36(6), 631-634
CODEN: ACIEAY; ISSN: 0570-0833
PUBLISHER: VCH
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Coupling 4-RC6H4COCOC6H4R-4 (I; R = Br) with HC.tplbond.CSi(CHMe2)3 in PhMe contg. Pd(PPh3)2C12, PPh3, CuI and Et3N gave 86% I [R = C.tplbond.CSi(CHMe2)3], which condensed with (PhCH2)2CO in refluxing alc. KOH to give 21% cyclopentadienone deriv. II (same R) (III). Analogous reaction of 3,5-R12C6H3C6H3R12-3,5 (IV; R1 = Br) with Me3SiC.tplbond.CH followed by deprotection with Bu4NF in THF gave 61% IV (R1 = C.tplbond.CH) (V). Condensing III with PhC.tplbond.CPh and deprotection as above gave hexaphenylbenzene deriv. VI, which condensed with III in 1:1 Ph2O-.alpha.-methylnaphthalene at 180-200.degree. and then deprotected to give a 1st-generation C146 dendron contg. 17 benzene rings and 4 ethynyl groups in 85% yield. Further condensation of the latter with addnl. III gave a C310 2nd-generation dendron with 37 benzene rings. II (R = H) and VI reacted similarly to give an unsubstituted 17-benzene-ring, 1st-generation dendron which underwent cyclodehydrogenation in CS2 contg. CuCl2 and AlCl3 to give 15% polycyclic arom. hydrocarbon (PAH). Analogous treatment of II (R = H) and V gave .apprx.80% PAH VII.

IT **189619-34-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of polyphenylene dendrimers and related polycyclic arom. hydrocarbons)

RN 189619-34-9 CAPLUS
CN 1,1':2',1'':4'',1''':3''',1'''':4'''',1''''':2''''',1''''''':4''''''',1''''''':3''''''',1'''''''':4'''''''',1'''''''':2'''''''',1''''''''-Undeciphenyl, 2''',2''''''',3''''',3'''''''',4',4''''',4'''''''',5',5''',5''''',5''''''',5'''''''',6',6''''-tetradecaphenyl-4''''''',6'''-bis(3',4',5'-triphenyl[1,1':2',1''-terphenyl]-4-yl)- (9CI) (CA INDEX NAME)

L12 ANSWER 36 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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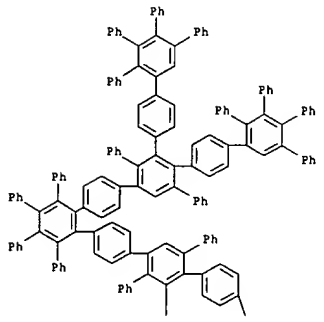

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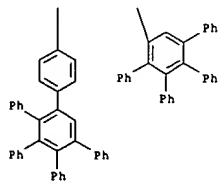


REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

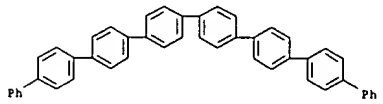
L12 ANSWER 37 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1997:217321 CAPLUS
DOCUMENT NUMBER: 126:278151
TITLE: Optical properties of polyparaphenyl thin films from oligomers to polymers
AUTHOR(S): Athouel, L.; Wery, J.; Dulieu, B.; Bullot, J.; Buisson, J. P.; Froyer, G.
CORPORATE SOURCE: Laboratoire de Physique Cristalline, Institut des Materiaux de Nantes, Universite de Nantes, 2 rue de la Houssiniere, Nantes, 44072/03, Fr.
SOURCE: Synthetic Metals (1997), 84(1-3), 287-288
CODEN: SYMEDZ; ISSN: 0379-6779
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

AB P-Sexiphenyl and p-octiphenyl were recently synthesized by an electrochem. method using monobrominated compds. and purified by sublimation. These oligomers can be processed by vacuum sublimation and high purity films were obtained whatever the substrate. UV-visible and IR absorption spectroscopy, Raman scattering spectroscopy, and photoluminescence at 77 K were used as characterization methods to facilitate the understanding of the electronic and optical properties of the poly-p-phenyls.

IT **70352-21-5**, p-Octiphenyl
RL: PRP (Properties)
(optical properties of p-sexiphenyl, p-octiphenyl and poly-p-phenylene thin films)

RN 70352-21-5 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''':4''''''',1''''''''-Octiphenyl (9CI) (CA INDEX NAME)

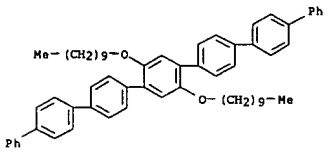


L12 ANSWER 38 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1997:174094 CAPLUS
DOCUMENT NUMBER: 126:298766
TITLE: Basic theory and applications of the Z-scan method
AUTHOR(S): Lian, I.-D.; Wen, T.-C.
CORPORATE SOURCE: Sch. Chem., Kaohsiung Medical College, Kaohsiung, Taiwan
SOURCE: Huaxue (1996), 54(4), 83-93
CODEN: HUHSA2; ISSN: 0441-3768
PUBLISHER: Chinese Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB A comprehensive anal. of the theory of z-scan method is reported here. The exptl. techniques and its recent applications on the detns. of optical nonlinearities of some org. materials such as tetrabenzporphyrin (TBP), phthalocyanine, bisbenzethiozole-substituted thiophene (BBTDOT) and didecyloxy substituted polyphenyl (DDOS) also were described briefly.

IT **137068-11-2**
RL: PRP (Properties)
(basic theory and applications of Z-scan method)

RN 137068-11-2 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Septiphenyl, 2''',5'''-bis(decyloxy)- (9CI) (CA INDEX NAME)

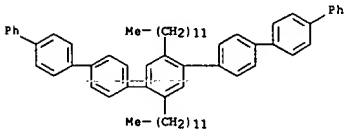


L12 ANSWER 39 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1997:21700 CAPLUS
DOCUMENT NUMBER: 126:157112
TITLE: Nonlinear optical and vibrational properties of conjugated polyaromatic molecules
AUTHOR(S): Rumi, Mariacristina; Zerbi, Giuseppe; Muellen, Klaus; Mueller, G.; Rehahn, Matthias
CORPORATE SOURCE: Dip. Chim. Ind. Ingegneria Chim. G. Natta, Politecnico Milano, Milan, 20133, Italy
SOURCE: Journal of Chemical Physics (1997), 106(1), 24-34
CODEN: JCPSA6; ISSN: 0021-9606
PUBLISHER: American Institute of Physics
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Raman spectra of oligo-p-phenylenes, oligorylenes, and oligoacenes of different chain lengths have been obtained in the solid state and in soln. Among the properties studied, particular attention is devoted to frequency and intensity dispersion of the Raman bands with increasing conjugation length and to the vibrational second order hyperpolarizability .gamma.r. The results obtained are compared with those relative to polyenic systems. The behavior of the various classes of mols. studied is in some cases different both in abs. values and trends. This fact is discussed in order to clarify the influence of the topol. of the .pi.-electron system on the properties of conjugated materials and to det. whether the presence of arom. rings in the main chain can confine .pi. electrons and so reduce delocalization. Oligorylenes turn out to be the compds. with the largest vibrational .gamma.r. The results also indicate that abs. Raman intensity shows strong intensity dispersion with conjugation length and can be used as a powerful tool in characterizing conjugated compds.

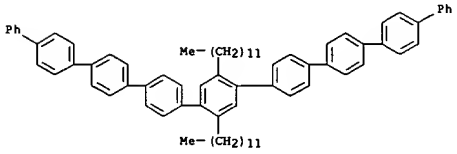
IT **178426-71-6 178426-73-8 178426-85-2**
186799-72-4
RL: PRP (Properties)
(nonlinear optical and Raman spectral vibrational properties of conjugated polyarom. mols.)

RN 178426-71-6 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Septiphenyl, 2''',5'''-didodecyl- (9CI) (CA INDEX NAME)

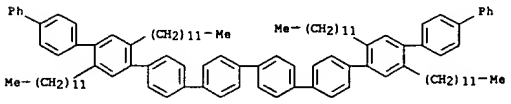


RN 178426-73-8 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Noviphenyl, 2'''',5''''-didodecyl- (9CI) (CA INDEX NAME)

L12 ANSWER 39 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)



RN 178426-85-2 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Deciphenyl, 2'',2''''''',5'',5'''''''-tetradodecyl- (9CI) (CA INDEX NAME)



RN 186799-72-4 CAPLUS
CN Poly(2,5-didodecyl[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''-septiphenyl]-4,4''''''-diyl) (9CI) (CA INDEX NAME)

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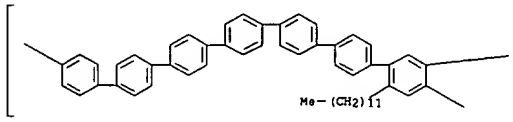

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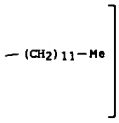

L12 ANSWER 39 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

L12 ANSWER 40 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1996:455745 CAPLUS
DOCUMENT NUMBER: 125:160815
TITLE: Planar para-phenylene oligomers
AUTHOR(S): Grimme, Julian; Scherf, Ullrich
CORPORATE SOURCE: Max-Planck-Institut Polymerforschung, Mainz, D-55128, Germany
SOURCE: Macromolecular Chemistry and Physics (1996), 197(7), 2297-2304
CODEN: MCHPES; ISSN: 1022-1352
PUBLISHER: Huethig & Wepf
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Planar methylene-bridged quinque- and septiphenyl oligomers were synthesized as sol., hitherto unknown compds. The series of homologous and planar ladder-type oligophenyls (ter-, quinque-, septiphenyl) was characterized esp. with respect to their optical properties (absorption and emission) as function of increasing chain length, and compared to the corresponding ladder-type polyphenylene. An effective conjugation length of about 12 benzene rings was detd. within this series of planar oligo- and polyphenyleneS.

IT **180386-75-8P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (intermediate; prepn. and properties of planar ladder polyphenylene oligomers)

RN 180386-75-8 CAPLUS
CN Methanone, (2',2''',2'''''',5',5''',5''''''-hexahexyl[1,1':4',1'':4'',1''':4''',1'''':4''''',1''''':4''''',1''''''-septiphenyl]-2,2'',2''''',2''''''',5'',5''''-hexayl)hexakis[[4-(1,1-dimethylethyl)phenyl]- (9CI) (CA INDEX NAME)

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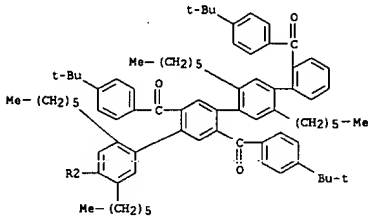

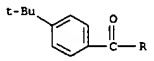

L12 ANSWER 40 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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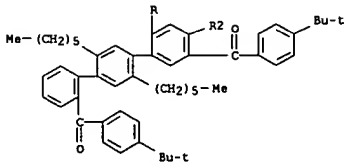

L12 ANSWER 41 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1996:437707 CAPLUS
DOCUMENT NUMBER: 125:195067
TITLE: Oligophenylene rods. A repetitive approach
AUTHOR(S): Liess, Petra; Hensel, Volker; Schlueter, A. Dieter
CORPORATE SOURCE: Institut Organische Chemie, Freie Universitaet Berlin, Berlin, D-14195, Germany
SOURCE: Liebigs Annalen (1996), (7), 1037-1040
CODEN: LANAEM; ISSN: 0947-3440
PUBLISHER: VCH
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The concept of repetitive synthesis was successfully applied to oligophenylenes. A series of monodisperse rigid-rods with .ltoreq. 16 phenylene rings and with defined functional groups at both termini was prepd. by the Suzuki cross-coupling reaction.

IT **180802-96-4P 180802-97-5P 180802-98-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of oligophenylene rods)

RN 180802-96-4 CAPLUS
CN Silane, (4'''''''''-bromo-3',3''',3''''',3''''''',5',5''',5''''',5'''''''-octahexyl[1,1':4',1'':4'',1''':4''',1'''':4''''',1''''':4''''',1''''''':4'''''',1'''''''-octiphenyl]-4-yl)trimethyl- (9CI) (CA INDEX NAME)

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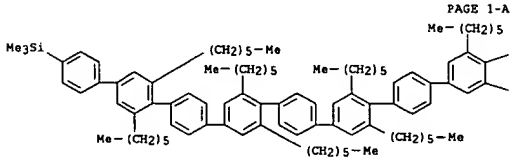

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RN 180802-97-5 CAPLUS
CN Boronic acid, [2'',2'''',2''''''',3,5,6'',6'''',6''''''-octahexyl-4'''''''-(trimethylsilyl)[1,1':4',1'':4'',1''':4''',1'''':4''''',1''''':4''''''',1'''''':4'''''',1'''''''-octiphenyl]-4-yl]- (9CI) (CA INDEX NAME)

L12 ANSWER 41 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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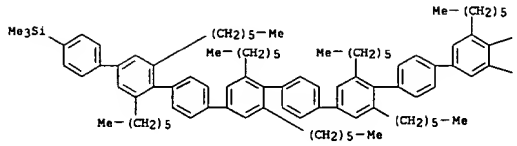

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RN 180802-98-6 CAPLUS
CN Boronic acid, (2'',2'''',2''''''',3,5,6'',6'''',6''''''-octahexyl-4'''''''-iodo[1,1':4',1'':4'',1''':4''',1'''':4''''',1''''':4''''''',1'''''':4'''''',1'''''''-octiphenyl]-4-yl)- (9CI) (CA INDEX NAME)

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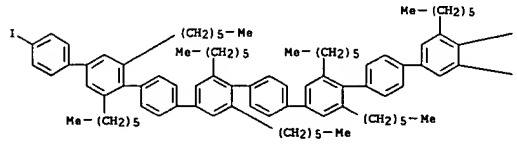

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IT **180802-99-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of oligophenylene rods)

L12 ANSWER 41 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)
RN 180802-99-7 CAPLUS
CN Silane, (4''''''''''''''''-bromo-3',3''',3'''',3''''''',3''''''''',3''''''
'''''',3''''''''''''',3''''''''''''''',5',5''',5'''',5''''''',5''''''''',5
''''''''''',5'''''''''''''',5''''''''''''''''-hexadecahexyl[1,1':1',1'':4''
1''':4''',1'''':4'''',1''''':4''''',1''''''':4''''''',1''''''':4''''''',1'''
'''':4''''''',1''''''''':4''''''''',1''''''''':4''''''''',1''''''''':4''''''''',1'''''''''
:4''''''''''',1''''''''''':4''''''''''',1''''''''''':4''''''''''',1'
''''''''''''',4''''''''''''''',1''''''''''''''''-hexadeciphenyl]-4-
yl)trimethyl- (9CI) (CA INDEX NAME)

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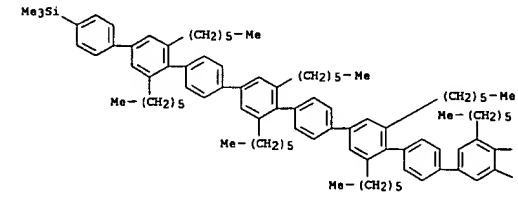

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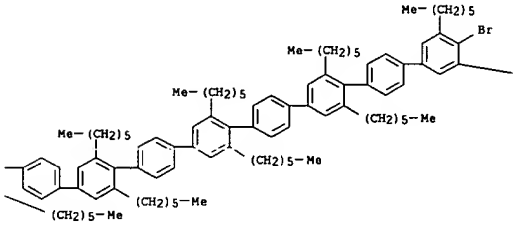

L12 ANSWER 41 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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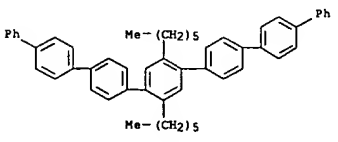
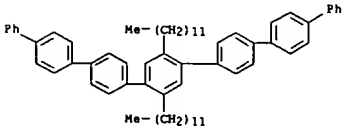
—(CH2)5—Me

L12 ANSWER 42 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1996:322702 CAPLUS
DOCUMENT NUMBER: 125:86242
TITLE: A versatile palladium-catalyzed synthesis of n-alkyl-substituted oligo-p-phenyls
AUTHOR(S): Galda, Patrick; Rehahn, Matthias
CORPORATE SOURCE: Polymer-Institut, Universitaet Karlsruhe, Karlsruhe, D-76128, Germany
SOURCE: Synthesis (1996), (5), 614-620
CODEN: SYNTBF; ISSN: 0039-7881
PUBLISHER: Thieme
DOCUMENT TYPE: Journal
LANGUAGE: English
AB High-yield Pd-catalyzed syntheses of constitutionally homogeneous, n-alkyl-substituted oligo-p-phenyls having 3-15 benzene rings connected to each other exclusively in the 1,4 fashion are reported. Most of the oligomers described readily dissolved in common org. solvents. Their thermal phase-transition temps. show that some of these rodlike oligomers can exist in different cryst. modification and/or form liq.-cryst. mesophases.
IT **178426-70-5P 178426-71-6P 178426-72-7P**
178426-73-8P 178426-82-9P 178426-83-0P
178426-84-1P 178426-85-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of n-alkyl-substituted oligo-p-phenyls with palladium catalysis and liq. cryst. behavior)
RN 178426-70-5 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Septiphenyl, 2''',5'''-dihexyl- (9CI) (CA INDEX NAME)

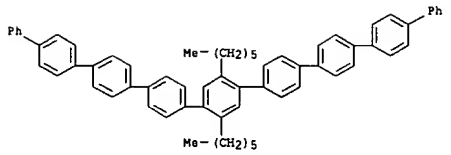


RN 178426-71-6 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Septiphenyl, 2''',5'''-didodecyl- (9CI) (CA INDEX NAME)

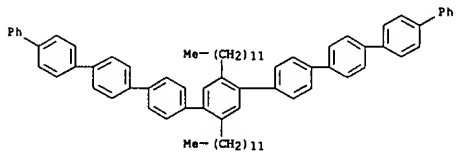


RN 178426-72-7 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1'''''
'':4'''''''',1''''''''-Noviphenyl, 2'''',5''''-dihexyl- (9CI) (CA INDEX

L12 ANSWER 42 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)
NAME)



RN 178426-73-8 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1'''''
'':4'''''''',1''''''''-Noviphenyl, 2'''',5''''-didodecyl- (9CI) (CA INDEX NAME)



RN 178426-82-9 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1'''''
'':4'''''''',1''''''''':4''''''''',1''''''''':4''''''''',1''''''''':4''''''''
'',1''''''''''':4''''''''''',1''''''''''':4''''''''''',1''''''''''':4
''''''''''''',1''''''''''''-Pentadeciphenyl,
2',2'''''''',2''''''''''',5',5''''''',5''''''''''-hexahexyl- (9CI) (CA INDEX NAME)

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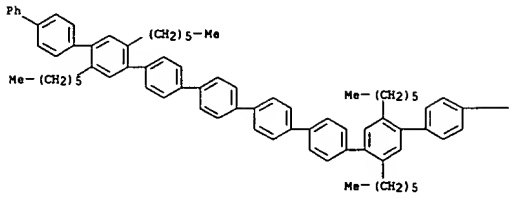

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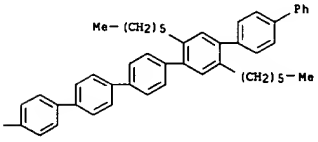

RN 178426-83-0 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1'''''':4''''''
,1''''''':4''''''',1'''''''':4'''''''',1''''''''':4''''''''',1'''''''''':4'''''''''
,1'''''''''':4'''''''''',1''''''''''':4''''''''''-Pentadeciphenyl,
2',2''''''',2''''''''''',5',5''''''',5''''''''''-hexadodecyl- (9CI)
(CA INDEX NAME)

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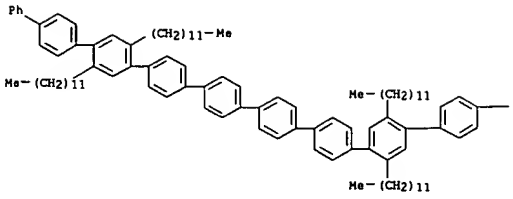

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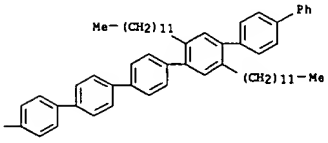
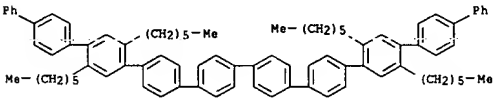
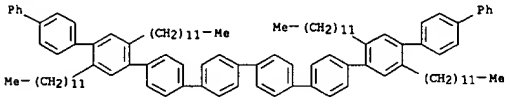


RN 178426-84-1 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''
,1''''''':4''''''',1'''''''':4'''''''',1''''''''':4''''''''-Deciphenyl,
2'',2''''''',5'',5''''''-tetrahexyl- (9CI) (CA INDEX NAME)



RN 178426-85-2 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''
,1''''''':4''''''',1'''''''':4'''''''',1''''''''':4''''''''-Deciphenyl,
2'',2''''''',5'',5''''''-tetradodecyl- (9CI) (CA INDEX NAME)

L12 ANSWER 42 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)



L12 ANSWER 43 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1996:260307 CAPLUS
DOCUMENT NUMBER: 125:10246
TITLE: Hexaterphenylyl- and hexaquaterphenylbenzene: the behavior of chromophores and electrophores in a restricted space
AUTHOR(S): Keegstra, Menno A.; De Feyter, Steven; De Schryver, Frans C.; Muellen, Klaus
CORPORATE SOURCE: Max-Planck-Inst. Polymerforschung, Mainz, D-55128, Germany
SOURCE: Angewandte Chemie, International Edition in English (1996), 35(7), 774-6
CODEN: ACIEAY; ISSN: 0570-0833
PUBLISHER: VCH
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 125:10246

AB Derivs. of the title compds. were prepd. The behavior of the compds. as multielectrophore and multichromophore .pi. systems was investigated.

IT 177364-15-7P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of hexaterphenylyl- and hexaquaterphenylbenzene, behavior of chromophores and electrophores in a restricted space)

RN 177364-15-7 CAPLUS
CN 1,1':4',1'':4'',1''':2''',1'''':4'''',1''''':4''''',1'''''':4''''''-Septiphenyl,
4,4'''''''-bis(1,1-dimethylpentadecyl)-3''',4''',5''',6'''-tetrakis[4''-
(1,1-dimethylpentadecyl)[1,1':4',1''-terphenyl]-4-yl]- (9CI) (CA INDEX
NAME)

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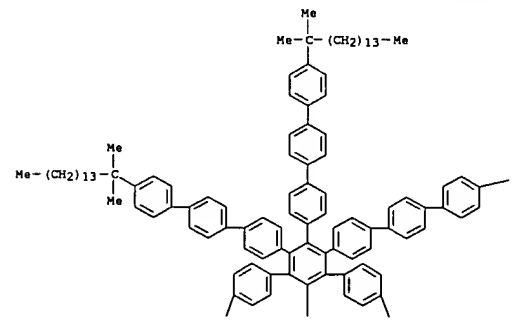

L12 ANSWER 43 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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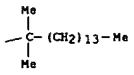

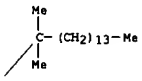

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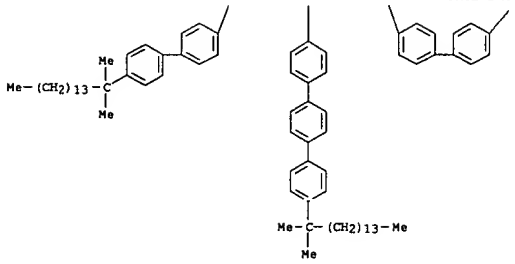


PAGE 2-B

L12 ANSWER 44 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1996:200132 CAPLUS
DOCUMENT NUMBER: 124:246135
TITLE: Organic superlattice material, production thereof and device therefrom
INVENTOR(S): Hamano, Koji; Kurata, Tetsuyuki; Fuchigami, Hiroyuki; Nobutoki, Eiji; Fukada, Che; Nakao, Yukyasu
PATENT ASSIGNEE(S): Mitsubishi Electric Corp, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 25 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

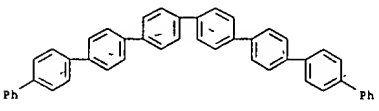
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07325329	A2	19951212	JP 1994-120058	19940601
JP 2975530	B2	19991110		

PRIORITY APPLN. INFO.: JP 1994-120058 19940601

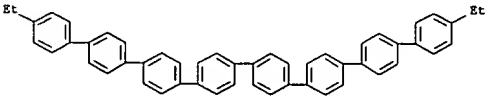
AB An org. material, suitable for use as nonlinear optical and electronic materials, is prepd. by laminating .gtoreq.2 kind of org. thin films having a thickness 0.5-100 nm, wherein the org. thin film comprises .pi.-conjugated linear oligomers.

IT **70352-21-5 174895-34-2 174895-39-7**
174895-43-3 174895-48-8
RL: DEV (Device component use); USES (Uses)
(org. superlattice material, prodn. thereof and device therefrom)

RN 70352-21-5 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1'''''
''-Octiphenyl (9CI) (CA INDEX NAME)

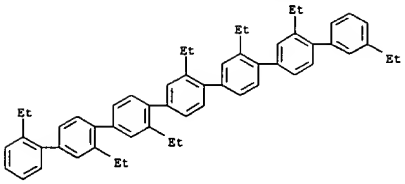


RN 174895-34-2 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1'''''
''-Octiphenyl, 4,4''''''''-diethyl- (9CI) (CA INDEX NAME)

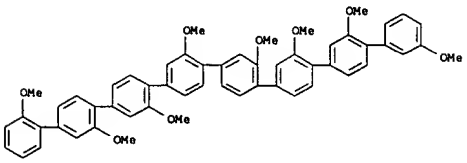


RN 174895-39-7 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1''''''-Septiphenyl,
2',2'',2''',2'''',2''''',2'''''',3-heptaethyl- (9CI) (CA INDEX NAME)

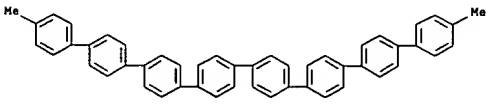
L12 ANSWER 44 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)



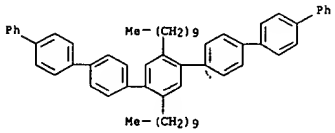
RN 174895-43-3 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1''''''
''-Octiphenyl, 2',2'',2''',2'''',2''''',2'''''',3-octamethoxy-
(9CI) (CA INDEX NAME)



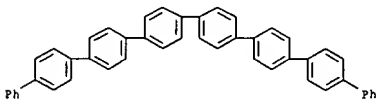
RN 174895-48-8 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1''''''
''-Octiphenyl, 4,4''''''''-dimethyl- (9CI) (CA INDEX NAME)



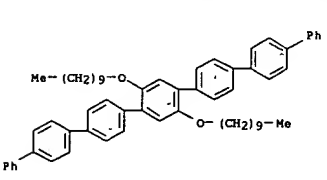
L12 ANSWER 45 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1995:992414 CAPLUS
DOCUMENT NUMBER: 124:70214
TITLE: Two-photon absorption and optical-limiting properties ov novel organic compounds. (Erratum to document cited in CA123:269625)
AUTHOR(S): He, Guang S.; Xu, Gen C.; Prasad, Paras N.; Reinhardt, Bruce A.; Bhatt, Jay C.; Dillard, Ann G.
CORPORATE SOURCE: Dep. Chem., State Univ. New York, Buffalo, NY, 14269-3000, USA
SOURCE: Optics Letters (1995), 20(18), 1930
CODEN: OPLEDP; ISSN: 0146-9592
PUBLISHER: Optical Society of America
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The errors were not reflected in the abstr. or the index entries.
IT 165330-09-6
RL: PRP (Properties)
(two-photon absorption and optical-limiting properties of (Erratum))
RN 165330-09-6 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':Septiphenyl, 2''',5'''-didecyl- (9CI) (CA INDEX NAME)



L12 ANSWER 46 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1995:836710 CAPLUS
DOCUMENT NUMBER: 124:55290
TITLE: Interrelation between the structure, intermolecular interaction factors, and solubility of aromatic compounds. 3. Solubility of methyl-substituted polyphenyls in toluene
AUTHOR(S): Gagarin, S. G.; Chickos, J. S.
CORPORATE SOURCE: IGI, Russia
SOURCE: Koks i Khimiya (1995), (2), 21-4
CODEN: KOKKAI; ISSN: 0023-2815
PUBLISHER: Metallurgiya
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB A thermodn. model was used to calc. soly. data for methylated linear polyphenyls in toluene. A relation between m.p. and .DELTA.S for the solid-to-liq. transition was obtained. The heat of melting, and then the soly., can be obtained.
IT 70352-21-5D, hexamethyl derivs.
RL: PRP (Properties)
(soly. and melting thermodn. of methylated polyphenyls)
RN 70352-21-5 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1''''' ''-Octiphenyl (9CI) (CA INDEX NAME)

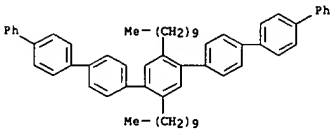


L12 ANSWER 47 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1995:664802 CAPLUS
DOCUMENT NUMBER: 123:97058
TITLE: Spectroscopic studies of new blue laser dyes in tetrahydrofuran solution and in composite glass
AUTHOR(S): Gvishi, R.; He, G. S.; Prasad, P. N.; Narang, U.; Li, M.; Bright, F. V.; Reinhardt, B. A.; Bhatt, J. C.; Dillard, A. G.
CORPORATE SOURCE: Photonics Research Laboratory, State Univ. New York Buffalo, Buffalo, NY, 14260-3000, USA
SOURCE: Applied Spectroscopy (1995), 49(6), 834-9
CODEN: APSPA4; ISSN: 0003-7028
PUBLISHER: Society for Applied Spectroscopy
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The authors investigated the linear absorption, emission wavelength-dependent excitation, fluorescence polarization excitation, and lasing properties of the UV-blue dyes didecyl para-polyphenyl heptamer (DDPPH), didecyloxy para-polyphenyl heptamer (DDOPPH), and bisbenzothiazole 3,4-didecyloxy thiophene (BBTDOT). The authors studied the effect of dye concn. on absorption and emission and the origin of the peaks in THF soln. and in a composite glass. They show that, in a composite glass, it is possible to impregnate the dye with d. of several orders without aggregation effects. The two heptamer dyes were found to be very photostable. All three dyes are promising candidates as laser dyes in the UV. Under excitation with a frequency-doubled dye laser (300 nm), the DDPPH lased at 377 nm. The DDOPPH lased at 425 nm and the BBTDOT lased at .apprx.450 nm when excited by the third harmonic of a Nd:YAG laser (355 nm). The output from the second heptamer in THF was photostable (less than 10% decrease) for more than 900,000 pulses and with a slope efficiency of approx. 20%.
IT 137068-11-2 165330-09-6, Didecyloxy para-polyphenyl heptamer
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(spectroscopic studies of new blue laser dyes in THF soln. and in composite glass)
RN 137068-11-2 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':Septiphenyl, 2''',5'''-bis(decyloxy)- (9CI) (CA INDEX NAME)

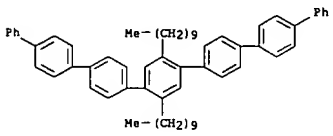


RN 165330-09-6 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':Septiphenyl, 2''',5'''-didecyl- (9CI) (CA INDEX NAME)

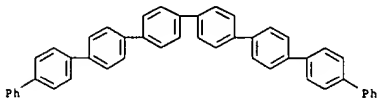
L12 ANSWER 47 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)



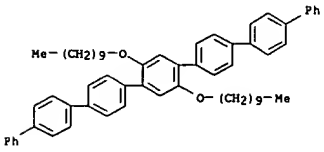
L12 ANSWER 48 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1995:627150 CAPLUS
DOCUMENT NUMBER: 123:269625
TITLE: Two-photon absorption and optical-limiting properties of novel organic compounds
AUTHOR(S): He, Guang S.; Xu, Gen C.; Prasad, Paras N.; Reinhardt, Bruce A.; Bhatt, Jay C.; Dillard, Ann G.
CORPORATE SOURCE: Department of Chemistry, State University of New York, Buffalo, NY, 14269-3000, USA
SOURCE: Optics Letters (1995), 20(5), 435-7
CODEN: OPLEDP; ISSN: 0146-9592
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The optical-limiting behavior and 2-photon absorption properties of 4 novel org. compd. solns. in THF were studied. An ultrashort laser source with 0.5-ps pulse width and 602-nm wavelength was employed. The transmissivities of the various 1-cm-thick soln. samples were measured as a function of the beam intensity and of the solute concn. The measured results can be fitted on the assumption that 2-photon absorption is the only predominant mechanism causing the obsd. optical limiting behavior. Based on the intensity-dependent transmissivity measurements, the mol. 2-photon absorption coeffs. for the 4 compds. are presented.
IT 165330-09-6
RL: PRP (Properties)
(two-photon absorption and optical-limiting properties of)
RN 165330-09-6 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':Septiphenyl, 2''',5'''-didecyl- (9CI) (CA INDEX NAME)



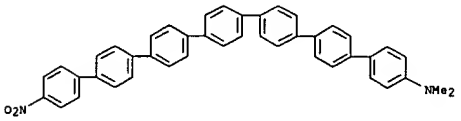
L12 ANSWER 49 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1995:287774 CAPLUS
DOCUMENT NUMBER: 122:82769
TITLE: Electrical properties of vacuum-deposited oligophenylene thin films
AUTHOR(S): Athouel, L.; Riou, M.-T.; Ciprelli, J.-L.; Clarisse, C.; Froyer, G.
CORPORATE SOURCE: France Telecom, Centre National d'Etudes des Telecommunications, BP 40, Lannion, 22301, Fr.
SOURCE: Synthetic Metals (1994), 68(1), 13-16
CODEN: SYMEDZ; ISSN: 0379-6779
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The dielec. properties of two new vacuum-deposited oligophenylenes, p-sexiphenylene and p-octiphenylene, are investigated in the frequency range 10 kHz-MHz. Exptl. data, connected with their good thermal stability and their hydrophobic nature, make them good candidates for dielec. interlayers or material for encapsulation in microelectronics technol.
IT 70352-21-5, p-Octiphenyl
RL: PRP (Properties)
(elec. properties of vacuum-deposited oligophenylene thin films)
RN 70352-21-5 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1''''' ''-Octiphenyl (9CI) (CA INDEX NAME)



L12 ANSWER 50 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1994:711218 CAPLUS
DOCUMENT NUMBER: 121:311218
TITLE: Third- and fifth-order optical nonlinearities in organic materials
AUTHOR(S): Said, A. A.; Wamsley, C.; Hagan, D. J.; Van Stryland, E. W.; Reinhardt, Bruce A.; Roderer, Paul; Dillard, Ann G.
CORPORATE SOURCE: Center for Research and Education in Optics and Lasers, University of Central Florida, Orlando, FL, 32816, USA
SOURCE: Chemical Physics Letters (1994), 228(6), 646-50
CODEN: CHPLBC; ISSN: 0009-2614
DOCUMENT TYPE: Journal
LANGUAGE: English
AB We measure the nonlinear optical properties of solns. of a bisbenzethiozole-substituted thiophene compd. (BBTDOT) and didecyloxy substituted polyphenyl (DDOS) using the Z-scan technique with 532 nm picosecond pulses. Both compds. exhibit two-photon absorption (2PA) and excited-state absorption (ESA) from the 2PA generated excited states. We measure the magnitude and sign of the real (refractive) and imaginary (2PA) parts of the third-order hyperpolarizability, and the excited-state absorptive and refractive cross sections. We observe third-order self-focusing in BBTDOT and self-defocusing in DDOS while both show excited-state defocusing. All these effects were previously obsd. and modeled in semiconductors giving insight into the nonlinearities occurring in these org. materials.
IT 137068-11-2
RL: PRP (Properties)
(third- and fifth-order optical nonlinearities in org. materials)
RN 137068-11-2 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':Septiphenyl, 2''',5'''-bis(decyloxy)- (9CI) (CA INDEX NAME)



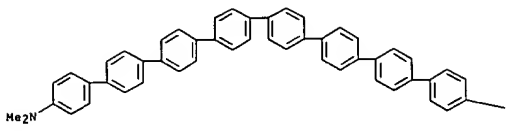
L12 ANSWER 51 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1994:680208 CAPLUS
DOCUMENT NUMBER: 121:280208
TITLE: Further studies on the polarizabilities and hyperpolarizabilities of the substituted polyenes and polyphenyls
AUTHOR(S): Albert, Israel D. L.; Pugh, David; Morley, John O.
CORPORATE SOURCE: Department Pure Applied Chemistry, University Strathclyde, Glasgow, UK G1 1XL, UK
SOURCE: Journal of the Chemical Society, Faraday Transactions (1994), 90(18), 2617-22
CODEN: JCFTEV; ISSN: 0956-5000
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The polarizabilities and first and second hyperpolarizabilities of the all-trans donor-acceptor substituted polyenes and polyphenyls, (CH3)2N-(CH=CH-CH=CH)n-NO2 and (CH3)2N-(C6H4)n-NO2 have been calcd. for values of n = 1 to 9 at a frequency corresponding to 0.65 eV, using a modified CNDOVSB method. A basis set including the 325 singly and doubly excited .pi.-electron configurations obtained from a group of six occupied and four unoccupied Hartree-Fock .pi. orbitals has been used and the polarizabilities and hyperpolarizabilities calcd. by the correction vector method. The results are compared with earlier work based on an expansion in terms of a large set of singly excited configurations only. In the case of n = 3 for the polyenes and n = 2 for the polyphenyls calcns. have been carried out with the complete set of .pi.-.pi.* configurations for each mol., using both the correction vector method and the sum-over-states expansion. The results confirm the assessment of the quadratic non-linear optical potential of these compds. made in earlier work, although the abs. values of the first hyperpolarizabilities are somewhat reduced.
IT 107716-15-4 107716-16-5 114261-05-1
RL: PRP (Properties)
(polarizabilities and hyperpolarizabilities of all-trans donor-acceptor substituted polyenes and polyphenyls)
RN 107716-15-4 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':Septiphenyl]-4-amine, N,N-dimethyl-4''''''-nitro- (9CI) (CA INDEX NAME)



RN 107716-16-5 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1'''''' ''-Octiphenyl]-4-amine, N,N-dimethyl-4''''''-nitro- (9CI) (CA INDEX NAME)

L12 ANSWER 51 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

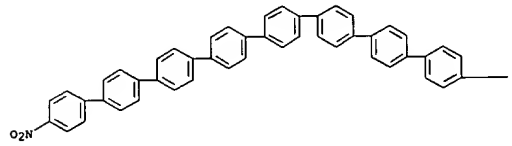
PAGE 1-A



PAGE 1-B

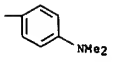
RN 114261-05-1 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1''''''':4'''''''-Noviphenyl]-4-amine, N,N-dimethyl-4'''''''''-nitro- (9CI) (CA INDEX NAME)

PAGE 1-A



L12 ANSWER 51 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

PAGE 1-B



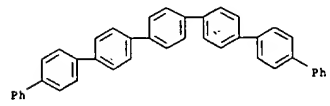
L12 ANSWER 52 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1994:283920 CAPLUS
DOCUMENT NUMBER: 120:283920
TITLE: Time-resolved degenerate four-wave mixing studies of solid-state poly(p-phenylene) oligomers
AUTHOR(S): Marcy, Henry O.; Rosker, Mark J.; Warren, Leslie F.; Reinhardt, Bruce A.; Sinclair, Michael; Seager, Carl H.
CORPORATE SOURCE: Rockwell Int. Sci. Cent., Thousand Oaks, CA, 91360, USA
SOURCE: Journal of Chemical Physics (1994), 100(4), 3325-33
CODEN: JCPSA6; ISSN: 0021-9606
DOCUMENT TYPE: Journal
LANGUAGE: English

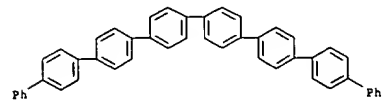
AB The authors have measured .chi.(3) for a series of solid-state samples of polyphenylene oligomers, (Ph)n, where n = 4-8 is the no. of Ph ring units, using optical pulses of 140 fs duration and 650 nm wavelength.

IT **70352-20-4**, p-Septiphenyl **70352-21-5**, p-Octiphenyl
RL: USES (Uses)
(time-resolved degenerate four-wave mixing studies of)

RN 70352-20-4 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''-Septiphenyl (9CI) (CA INDEX NAME)



RN 70352-21-5 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1'''''''-Octiphenyl (9CI) (CA INDEX NAME)



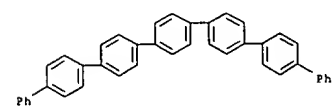
L12 ANSWER 53 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1993:255638 CAPLUS
DOCUMENT NUMBER: 118:255638
TITLE: Crystal structures, phase transitions and energy calculations of poly(p-phenylene) oligomers
AUTHOR(S): Baker, Kenneth N.; Fratini, Albert V.; Resch, Timothy; Knachel, Howard C.; Adams, W. W.; Socci, E. P.; Farmer, B. L.
CORPORATE SOURCE: Dep. Chem., Univ. Dayton, Dayton, OH, 45469-2357, USA
SOURCE: Polymer (1993), 34(8), 1571-87
CODEN: POLMAG; ISSN: 0032-3861
DOCUMENT TYPE: Journal
LANGUAGE: English

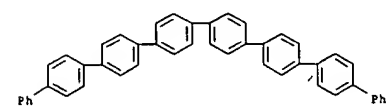
AB The room temp. crystal structures, unit cell dimensions at 110 K, and phase transitions of 3 poly(p-phenylene) oligomers are reported. The structures of p-quinquephenyl (I), p-sexiphenyl (II), and p-septiphenyl (III), each belonging to space group P21/c, are similar to those of shorter oligomers. The mols. are linear and planar. The herringbone nature of the packing is similar for I and III, while a considerably greater tilt occurs in II. A time-dependent solid state transition is obsd. for I, II, and III when crystals are cooled to 110 K. At elevated temps., thermal measurements indicate the oligomers to be thermotropic liq. crystals. The crystal-smectic transition temps. are reported for I, II, III, and p-octiphenyl. The results of a mol. mechanics study on the conformation and packing of II are also presented.

IT **70352-20-4**, p-Septiphenyl **70352-21-5**, p-Octiphenyl
RL: PRP (Properties)
(crystal structure and phase transition and conformational energies of)

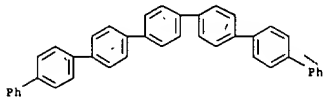
RN 70352-20-4 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''-Septiphenyl (9CI) (CA INDEX NAME)



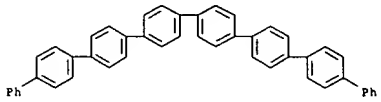
RN 70352-21-5 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1'''''''-Octiphenyl (9CI) (CA INDEX NAME)



L12 ANSWER 54 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1993:233177 CAPLUS
DOCUMENT NUMBER: 118:233177
TITLE: Eigenvalue distributions and asymptotic lines of the energy in alternant hydrocarbons
AUTHOR(S): Hall, G. G.; Arimoto, S.
CORPORATE SOURCE: Shell Cent. Math. Educ., Univ. Nottingham, Nottingham, NG7 2RD, UK
SOURCE: International Journal of Quantum Chemistry (1993), 45(3), 303-28
CODEN: IJQCB2; ISSN: 0020-7608
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The bands of orbital energies for several polymeric species of alternant hydrocarbon are calcd. From these, the densities of states are graphed. By integration over the bands, the slope of the asymptotic line for the energy is calcd. and compared with the energies of members of the same series calcd. directly. For some series, the second, const. term in the asymptotic line can also be calcd. theor. and compared with that derived from the mol. energies. The results for some related series indicate that for long mols. the no. of Kekule structures does not influence the major term in the energy. The extension of the argument to two-dimensional arrays of hexagons is indicated and some results reported.
IT **70352-20-4 70352-21-5 147188-63-4**
147188-64-5
RL: PRP (Properties)
(total .pi. energy of)
RN 70352-20-4 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Septiphenyl (9CI) (CA INDEX NAME)

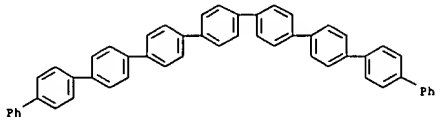


RN 70352-21-5 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Octiphenyl (9CI) (CA INDEX NAME)

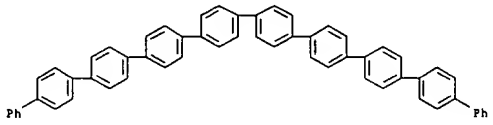


RN 147188-63-4 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''

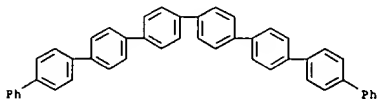
L12 ANSWER 54 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)
''':4'''''',1'''''''-Noviphenyl (9CI) (CA INDEX NAME)



RN 147188-64-5 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''
''':4'''''',1''''''':4''''''',1'''''''-Deciphenyl (9CI) (CA INDEX NAME)

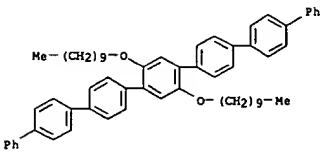


L12 ANSWER 55 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1992:490948 CAPLUS
DOCUMENT NUMBER: 117:90948
TITLE: Synthesis and characterization of phenylene linear oligomers
AUTHOR(S): Faid, K.; Siove, A.; Chevrot, C.; Riou, M. T.; Froyer, G.
CORPORATE SOURCE: Lab. Rech. Macromol., Univ. Paris-Nord, Villetaneuse, 93430, Fr.
SOURCE: Journal de Chimie Physique et de Physico-Chimie Biologique (1992), 89(5), 1305-11
CODEN: JCPBAN; ISSN: 0021-7689
DOCUMENT TYPE: Journal
LANGUAGE: French
AB Electrochem. coupling of monohalo-terminated bi-, ter-, and quaterphenyls in AcNMe2 contg. bipyridinenickel dibromide provided the dimers in 18-49% yield. The products were characterized from IR spectra. The electrochem. behaviors of p-sexiphenyl and its monomer (4-bromo-p-terphenyl) were compared.
IT **70352-21-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, by electrochem. coupling of bromoquaterphenyl, in presence of nickel catalyst)
RN 70352-21-5 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Octiphenyl (9CI) (CA INDEX NAME)



L12 ANSWER 56 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1991:618105 CAPLUS
DOCUMENT NUMBER: 115:218105
TITLE: Influence of two-photon absorption on third-order nonlinear optical processes as studied by degenerate four-wave mixing: the study of soluble didecyloxy-substituted polyphenyls
AUTHOR(S): Zhao, Mmngtang; Cui, Yiping; Samoc, Marek; Prasad, Paras N.; Unroe, Marilyn R.; Reinhardt, Bruce A.
CORPORATE SOURCE: Dep. Chem., State Univ. New York, Buffalo, NY, 14214, USA
SOURCE: Journal of Chemical Physics (1991), 95(6), 3991-4001
CODEN: JCPSA6; ISSN: 0021-9606
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The influence was studied of two-photon absorption on the third-order nonlinear optical properties of model org. mols. using the technique of degenerate four-wave mixing (DFWM). A theor. formulation shows that the presence of two-photon absorption, which is related to the imaginary part of the third-order susceptibility .chi.(3), leads to an enhancement of the effective third-order nonlinearity and to the appearance of effects caused by the formation of two-photon generated excited states. The dynamic behavior of the nonlinearity is then governed by the properties of excited mols. The nonlinear effects also involve contributions which depend on the fith power of the elec. field. A systematic study of third-order nonlinear optical properties was performed for alkoxy (-C10H21OCH) substituted p-polyphenyl oligomers using the technique of time-resolved degenerate four-wave mixing with subpicosecond pulses at 602 nm. Exptl. detd. values of the second-order hyperpolarizability .gamma. for the oligomers increase smoothly from the monomer to the trimer, with a more rapid increase to the pentamer and to the heptamer. In addn., the hyperpolarizabilities for the pentamer and the heptamer appear to be complex. A smooth increase of the .gamma. value is expected from an increase of the .pi. conjugation from a shorter chain oligomer to a longer chain oligomer. The more rapid increase of the .gamma. value in the pentamer, and esp. inb the heptamer, however, cannot be explained stisfactorily by only taking into account the .pi.-conjugation length. Two-photon absorption for the pentamer and the heptamer at the measurement wavelength of 602 nm is suggested to be important as the obsd. dynamic behavior is satisfactorily explained by the predictions of the theor. model presented here. It is shown that the effective .gamma. value for a two-photon absorbing material is a function of optical intensity, pulse width, and sample length if one uses the conventional degenerate four-wave mixing description.
IT **137068-11-2**
RL: PRP (Properties)
(nonlinear optical properties of, effect of two-photon absorption on third-order)
RN 137068-11-2 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Septiphenyl, 2''',5'''-bis(decyloxy)- (9CI) (CA INDEX NAME)

L12 ANSWER 56 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)



L12 ANSWER 57 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1991:229713 CAPLUS
DOCUMENT NUMBER: 114:229713
TITLE: Raman characteristics of poly(p-phenylene) and oligomers
AUTHOR(S): Berdyugin, V. V.; Shorygin, P. P.; Sergeev, V. A.; Arnautov, S. A.
CORPORATE SOURCE: Inst. Org. Khim. im. Zelinskogo, Moscow, USSR
SOURCE: Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya (1990), (9), 2167-70
CODEN: IASKA6; ISSN: 0002-3353
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Raman spectroscopic study of poly(p-phenylene) (I), terphenyl, sesquiphenyl, and dodecaphenyl (II) showed that the line intensities at 1600 and 1280 cm-1 increased linearly with increasing chain length and could be used for characterization of I. Quinone structures were found in thermally treated I and II; the presence of these structures was explained by the effect of catalyst residues on the samples subjected to heat treatment.
IT **133960-43-7**
RL: PRP (Properties)
(structure of, Raman spectroscopy in study of)
RN 133960-43-7 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''':1''''''':4''''''',1'''''''':4'''''''',1''''''''':4''''''''',1'''''''''':4''''''''':1''''''''''-Dodecaphenyl (9CI) (CA INDEX NAME)

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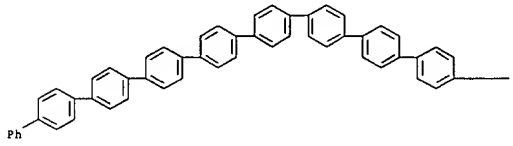
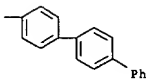
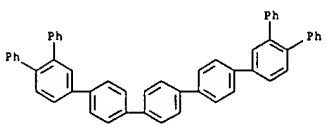


PAGE 1-B

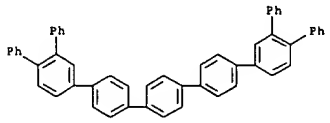


L12 ANSWER 57 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

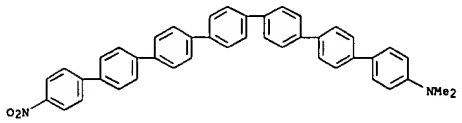
L12 ANSWER 58 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1991:186452 CAPLUS
DOCUMENT NUMBER: 114:186452
TITLE: Structural transformations in crystalline oligomers of polyparaphenylene
AUTHOR(S): Baker, Kenneth N.; Knachel, Howard C.; Fratini, Albert V.; Adams, W. Wade
CORPORATE SOURCE: Dep. Chem., Univ. Dayton, Dayton, OH, 45469, USA
SOURCE: Materials Research Society Symposium Proceedings (1989), 134(Mater. Sci. Eng. Rigid-Rod Polym.), 497-503
CODEN: MRSPDH; ISSN: 0272-9172
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The room- and low-temp. crystal structures of p-quinquephenyl, p-sexiphenyl, 22,45-diphenyl-p-quinquephenyl 22,65-diphenyl-p-septiphenyl, and 1,2,4-triphenylbenzene polyparaphenylene oligomers were presented. The unsubstituted oligomers exhibit a solid state transition when cooled from room temp. to 110K, as indicated by a change in crystallog. space group. No transition is obsd. from the substituted oligomers other than the usual thermal contraction of the unit cell. The transition obsd. for the unsubstituted oligomers is interpreted in terms of a conformational change from an averaged planar structure to a static non-planar one. Comparisons of room temp. and low temp. crystal data are presented.
IT **113538-30-0**, 22,65-Diphenyl-p-septiphenyl
RL: PRP (Properties)
(crystal structure of, at room and low temps.)
RN 113538-30-0 CAPLUS
CN 1,1':3',1'':4'',1''':4''',1'''':4'''',1''''':3''''',1''''''-Septiphenyl, 4''''',6'-diphenyl- (9CI) (CA INDEX NAME)



L12 ANSWER 59 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1990:612941 CAPLUS
DOCUMENT NUMBER: 113:212941
TITLE: Crystal structures of poly(p-phenylene) oligomers containing pendant phenyl groups
AUTHOR(S): Baker, Kenneth N.; Fratini, Albert V.; Adams, W. Wade
CORPORATE SOURCE: Dep. Chem., Univ. Dayton, Dayton, OH, 45469, USA
SOURCE: Polymer (1990), 31(9), 1623-31
CODEN: POLMAG; ISSN: 0032-3861
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The room temp. crystal structures of 1,2,4-triphenylbenzene, 22,45-diphenyl-p-quinquephenyl, and 22,65-diphenyl-p-septiphenyl were investigated as part of a research program in rigid-rod polymers. The mols. were non-planar, in contrast to the planar structures found at room temp. for the unsubstituted polyphenyls. The oligomer axis did not align with any of the crystallog. axes. The pendant-oligomer bond, however, did align with the longest crystallog. axis. The pendant torsion angle was >45.degree. and increased with increasing chain length.
IT **113538-30-0**
RL: PRP (Properties)
(crystal structure of)
RN 113538-30-0 CAPLUS
CN 1,1':3',1'':4'',1''':4''',1'''':4'''',1''''':3''''',1'''''''-Septiphenyl, 4''''',6'-diphenyl- (9CI) (CA INDEX NAME)



L12 ANSWER 60 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1990:27665 CAPLUS
DOCUMENT NUMBER: 112:27665
TITLE: Design of novel conjugated molecules with large hyperpolarizabilities
AUTHOR(S): Morley, J. O.
CORPORATE SOURCE: Fine Chem. Res. Cent., ICI Colours and Fine Chem., Manchester, M9 3DA, UK
SOURCE: Springer Proceedings in Physics (1989), Volume Date 1988, 36(Nonlinear Opt. Org. Semicond.), 86-97
CODEN: SPPPEL; ISSN: 0930-8989
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The hyperpolarizability was calcd. for a no. of org. mols. by using a CNDO/S method coupled with a sum-over-states procedure. The method uses an initial CI treatment of the ground and excited state wave functions and than evaluation of the hyperpolarizability tensor from the improved wave functions.
IT **107716-15-4 107716-16-5 114261-05-1**
RL: PRP (Properties)
(hyperpolarizability calcns. for)
RN 107716-15-4 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Septiphenyl]-4-amine, N,N-dimethyl-4''''''-nitro- (9CI) (CA INDEX NAME)



RN 107716-16-5 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1''''''':4'''''''-Octiphenyl]-4-amine, N,N-dimethyl-4'''''''-nitro- (9CI) (CA INDEX NAME)

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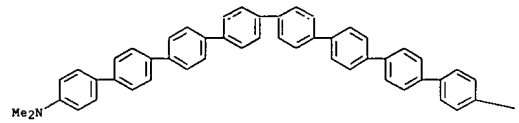

L12 ANSWER 60 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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RN 114261-05-1 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1''''''':4'''''''-Noviphenyl]-4-amine, N,N-dimethyl-4'''''''''-nitro- (9CI) (CA INDEX NAME)

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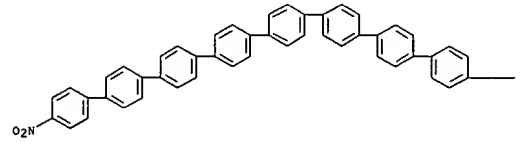

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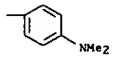
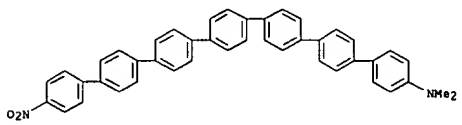


L12 ANSWER 61 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1988:445658 CAPLUS
DOCUMENT NUMBER: 109:45658
TITLE: A CNDOVSB program for the calculation of second-order molecular polarizabilities, and its application
AUTHOR(S): Allen, S.; Morley, J. O.; Pugh, D.; Docherty, V. J.
CORPORATE SOURCE: Electron. Group, ICI, Runcorn/Cheshire, UK
SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (1987), 682(Mol. Polym. Optoelectron. Mater.: Fundam. Appl.), 20-6
CODEN: PSISDG; ISSN: 0277-786X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A semiempirical CNDOVSB computer program was developed to calc. the 2nd-order nonlinear optical polarizabilities of mols. The program was parameterized by comparison of calcd. and exptl. values of mol. properties over a large wavelength range. The use of the program is described, both in the evaluation of the potential of specific compds. and also to study trends in series of related mols. In particular, the effect of conjugation length on the nonlinear optical properties of polyphenyls and polyenes is described.
IT **107716-15-4 107716-16-5**
RL: PRP (Properties)
(second-order nonlinear optical polarizability of, computer program for calcn. of)
RN 107716-15-4 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Septiphenyl]-4-amine, N,N-dimethyl-4''''''-nitro- (9CI) (CA INDEX NAME)



RN 107716-16-5 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1''''''':4'''''''-Octiphenyl]-4-amine, N,N-dimethyl-4'''''''-nitro- (9CI) (CA INDEX NAME)

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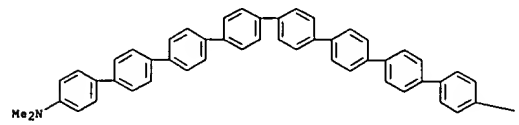

L12 ANSWER 61 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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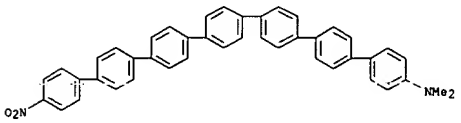
L12 ANSWER 62 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1988:186108 CAPLUS
DOCUMENT NUMBER: 108:186108
TITLE: Non-linear optical properties of organic molecules. Part 2. Effect of conjugation length and molecular volume on the calculated hyperpolarizabilities of polyphenyls and polyenes
AUTHOR(S): Morley, John O.; Docherty, Vincent J.; Pugh, David
CORPORATE SOURCE: Org. Div., Imp. Chem. Ind. PLC, Blackley/Manchester, M9 3DA, UK
SOURCE: Journal of the Chemical Society, Perkin Transactions 2: Physical Organic Chemistry (1972-1999) (1987), (9), 1351-5
CODEN: JCPKBH; ISSN: 0300-9580
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The calcd. hyperpolarizabilities of the sym. polyphenyls, contg. an electron-donating dimethylamino group and an electron-attracting nitro group positioned at opposite ends of the conjugated system, slowly increase with an increasing no. of Ph units; the effect per unit vol. is a max. for 4-dimethylamino-4'-nitroterphenyl. In contrast, the calcd. values for polyenes contg. the same donor and attractor increase rapidly with an increasing no. of ethenyl units, and the effect per unit vol. is a max. for 20 units. Overall, the polyene system shows an effect which is at least 20 times that of the polyphenyl system and 10 times that of any other known system. A similar effect is also found in the dimethylaminopolyenals, though a comparison between calcd. and exptl. dipole moments and electronic transition energies suggests that their hyperpolarizabilities may be somewhat overestimated at the CNDO level of approxn.

IT **107716-15-4 107716-16-5 114261-05-1**
RL: PRP (Properties)
(hyperpolarizabilities and nonlinear optical properties of, MO calcn. of)

RN 107716-15-4 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Septiphenyl]-4-amine, N,N-dimethyl-4''''''-nitro- (9CI) (CA INDEX NAME)



RN 107716-16-5 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Octiphenyl]-4-amine, N,N-dimethyl-4''''''''-nitro- (9CI) (CA INDEX NAME)

L12 ANSWER 62 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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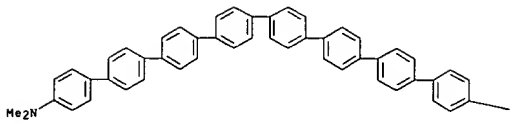

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RN 114261-05-1 CAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Noviphenyl]-4-amine, N,N-dimethyl-4''''''''-nitro- (9CI) (CA INDEX NAME)

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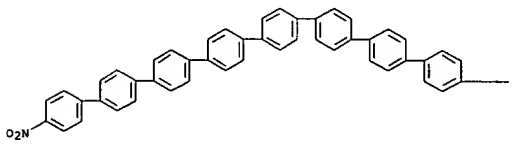
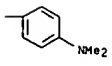


PAGE 1-B



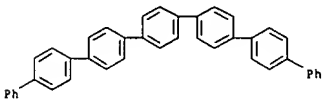
L12 ANSWER 63 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1988:131124 CAPLUS
DOCUMENT NUMBER: 108:131124
TITLE: One pot synthesis of p-polyphenyls via the intramolecular cyclization of 3-(dimethylamino)hex-5-en-1-ynes
AUTHOR(S): Unroe, Marilyn R.; Reinhardt, Bruce A.
CORPORATE SOURCE: Nonmet. Mater. Div., Air Force Mater. Lab., Wright-Patterson AFB, OH, 45433-6533, USA
SOURCE: Synthesis (1987), (11), 981-6
CODEN: SYNTBF; ISSN: 0039-7881
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 108:131124

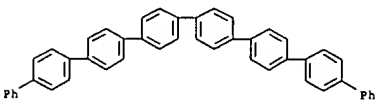
AB Reaction of p-Me2NCH2C.tplbond.CC6H42C.tplbond.CCH2NMe2 (Z = bond, 4-C6H4, 4-C6H4C6H4-4) with (E)-RCH:CR1CH2Br (R = Ph, R1 = H, Ph; R = 4PhC6H4, R1 = H) gives, after initial quaternization, base-catalyzed rearrangement, and intramol. cyclization, 19-62% polyphenyls p-(4,3-RR1C6H3)C6H4Z(C6H3RR1-4,3)-p.

IT **70352-20-4P 70352-21-5P 113538-30-0P 113538-31-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 70352-20-4 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':-Septiphenyl (9CI) (CA INDEX NAME)

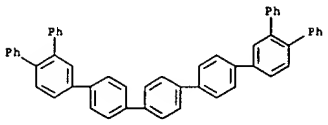


RN 70352-21-5 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Octiphenyl (9CI) (CA INDEX NAME)

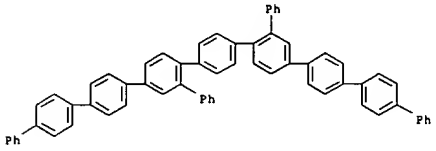


RN 113538-30-0 CAPLUS
CN 1,1':3',1'':4'',1''':4''',1'''':4'''',1''''':3''''',1'''''':-Septiphenyl, 4''''',6'-diphenyl- (9CI) (CA INDEX NAME)

L12 ANSWER 63 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)



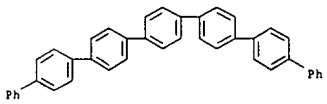
RN 113538-31-1 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1'''''''':4'''''''',1''''''''-Noviphenyl, 2''''',3'''-diphenyl- (9CI) (CA INDEX NAME)



L12 ANSWER 64 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1983:414950 CAPLUS
DOCUMENT NUMBER: 99:14950
TITLE: Electrically conductive polymers
INVENTOR(S): Naarmann, Herbert; Muench, Volker; Penzien, Klaus; Schlag, Johannes
PATENT ASSIGNEE(S): BASF A.-G. , Fed. Rep. Ger.
SOURCE: Ger. Offen., 18 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3215970	A1	19830303	DE 1982-3215970	19820429
PRIORITY APPLN. INFO.:			DE 1981-3117428	19810502

AB Stable elec. conductors from polymers with cond. >10-2 S/cm have the formula A-(X)y, where A is substituted arom. group, X = NiN-MFn where M = B, Ge, Si, P, As, or Sb with n = 4, 5, or 6, and y = 1, 2 or 3. Thus, a polyacetylene film was placed in a suspension of the diazonium salt p-MeC6H4N2AsF6 2.0 parts in Voltalef oil (chlorofluorinated oil, Ugine Kuhlman Co.) and heated for 3 h under N2 at 80-100.degree.. The film has a cond. of 0.36 S/cm and is suitable as either an antistatic agent or solar-cell conductor.
IT 70352-20-4
RL: USES (Uses)
(elec. conductor from modified)
RN 70352-20-4 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Septiphenyl (9CI) (CA INDEX NAME)



L12 ANSWER 65 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1981:175723 CAPLUS
DOCUMENT NUMBER: 94:175723
TITLE: Chemical structure and glass transition temperature of polyarimides
AUTHOR(S): Korzhavin, L. N.; Bronnikov, S. V.; Frenkel, S. Ya.
CORPORATE SOURCE: Inst. Vysokomol. Soedin., Leningrad, USSR
SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A (1981), 23(2), 366-74
CODEN: VYSAAF; ISSN: 0507-5475
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB The glass transition temp. (Tg) was calcd. for 48 arom. polyimides using the equation of A. Askadskii and G. Slonimskii (1975) and a correlation was established between the Tg and chain flexibility and internal interactions. The crit. chain flexibility was 0.67. Above this value, the Tg of the polyamides was detd. wholly by intermol. interaction forces of adjacent chains.
IT 77496-67-4 77496-68-5 77496-72-1
77509-08-1
RL: PRP (Properties)
(glass transition temp. of, chain flexibility and intermol. interaction in relation to)
RN 77496-67-4 CAPLUS
CN Poly[(5,7-dihydro-1,3,5,7-tetraoxobenzo[1,2-c:4,5-c']dipyrrole-2,6(1H,3H)-diyl)[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''-septiphenyl]-4,4''''''-diyl] (9CI) (CA INDEX NAME)

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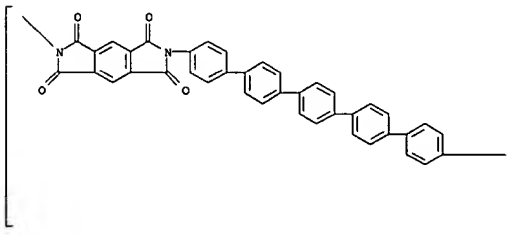
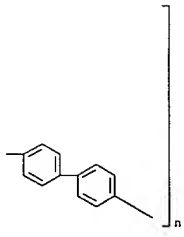


L12 ANSWER 65 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

PAGE 1-B



RN 77496-68-5 CAPLUS
CN Poly[(5,7-dihydro-1,3,5,7-tetraoxobenzo[1,2-c:4,5-c']dipyrrole-2,6(1H,3H)-diyl)[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''-octiphenyl]-4,4''''''''-diyl] (9CI) (CA INDEX NAME)

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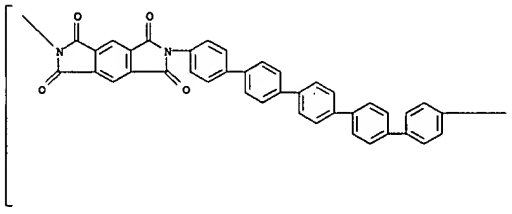
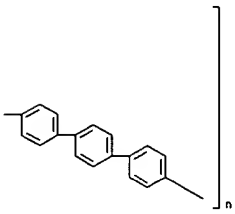


L12 ANSWER 65 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

PAGE 1-B



RN 77496-72-1 CAPLUS
CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)oxy(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''-septiphenyl]-4,4''''''-diyl] (9CI) (CA INDEX NAME)

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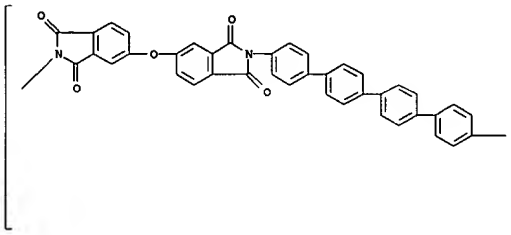
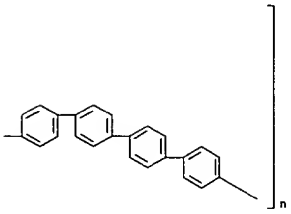


L12 ANSWER 65 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

PAGE 1-B



L12 ANSWER 65 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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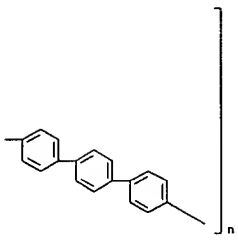
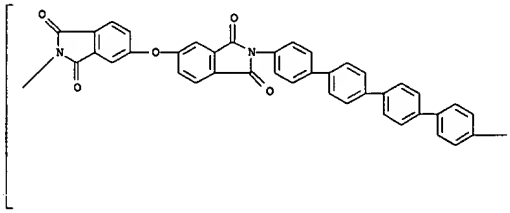


RN 77509-08-1 CAPLUS
CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)oxy(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''-octiphenyl]-4,4'''''''-diyl] (9CI) (CA INDEX NAME)

PAGE 1-A



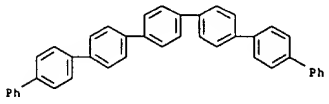
L12 ANSWER 66 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1979:404852 CAPLUS
DOCUMENT NUMBER: 91:4852
TITLE: Relation between molecular structures and properties of organic compounds - p- and m-polyphenyls
AUTHOR(S): Chao, Hsueh-Chuang; Kao, Chen-Heng
CORPORATE SOURCE: Dep. Chem., Nankai Univ., Tientsin, Peop. Rep. China
SOURCE: Huaxue Xuebao (1979), 37(1), 67-70
CODEN: HHHPA4; ISSN: 0567-7351
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

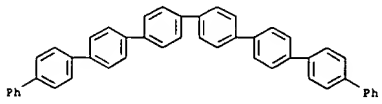
AB The HOMO energies (EH) of p- and m-polyphenyls were calcd. by graph theory. The EH and the wave no. (.nu.) of max. absorption bands follow the rule of homologous linearity. The variation of EH and .nu. with the no. of benzene rings was greater for p-polyphenyls then for meta isomers.

IT **70352-20-4 70352-21-5**
RL: PRP (Properties)
(HOMO energy and absorption max. of)

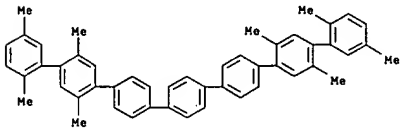
RN 70352-20-4 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''-Septiphenyl (9CI) (CA INDEX NAME)



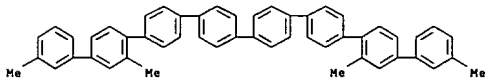
RN 70352-21-5 CAPLUS
CN 1,1':4',1''':4'',1''':4''',1'''':4'''',1''''':4''''',1''''':4''''',1''''''-Octiphenyl (9CI) (CA INDEX NAME)



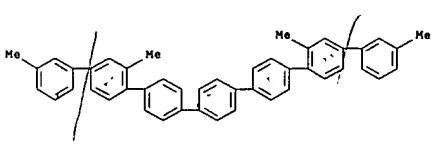
L12 ANSWER 67 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1978:152138 CAPLUS
DOCUMENT NUMBER: 88:152138
TITLE: Synthesis of alkylated p-polyphenylenes. II. Methyl and hexyl substituted derivatives
AUTHOR(S): Kovyrzina, K. A.; Tsvetkova, T. A.
CORPORATE SOURCE: Sukhum. Fiz.-Tekh. Inst., Sukhumi, USSR
SOURCE: Zhurnal Organicheskoi Khimii (1977), 13(11), 2395-8
CODEN: ZORKAE; ISSN: 0514-7492
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB P-polyphenylenes I [n = 3, R = H, R1 = Me or Me2CH (II); n = 4, R = 2,5-Me2C6H3, R1 = Me], III, IV, 41,44-dihexyl-p-quaterphenyl, and 41,45-dihexyl-p-quinquiphenyl were prepd. by condensation of appropriate iodine compds. E.g., 41,42-diiodo-p-terphenyl with 2-iodocymene in the presence of powd. Cu and Hg gave 25.0% II.
IT **66252-70-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 66252-70-8 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''-Septiphenyl, 2,2',2''''',2''''',5,5',5''''',5''''''-octamethyl- (9CI) (CA INDEX NAME)



L12 ANSWER 68 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1971:75762 CAPLUS
DOCUMENT NUMBER: 74:75762
TITLE: Systematics of the electronic spectra of the p-oligophenylenes and their substituted analogs
AUTHOR(S): Berlman, Isadore B.; Wirth, Hermann O.; Steingraber, O. J.
CORPORATE SOURCE: Argonne Natl. Lab., Argonne, IL, USA
SOURCE: Journal of Physical Chemistry (1971), 75(3), 318-25
CODEN: JPCHAX; ISSN: 0022-3654
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The fluorescence characteristics (lifetime, quantum yield, Stokes loss, spectral width, etc.) of about 20 variously substituted and bridged p-oligophenylenes were investigated so that the relation between mol. structure and these characteristics would be better understood. When alkyl chains are employed as substituents to enhance the soly. of a compd., it is important that these substituents be placed in the proper positions, for when in the para or meta positions of terminal rings, their effect on the fluorescence characteristics is minimal, but when placed on the ortho position of the terminal rings or on the meta and ortho positions of the phenylene rings, certain characteristics such as quantum yield are adversely affected by steric crowding. Moreover, an alkyloxy group substituted on the para position will enhance the permanent dipole moment and the molar extinction coeff. These studies support the contention that the fluorescence transition is allowed and long-axis polarized.
IT **31158-37-9**
RL: PRP (Properties)
(fluorescence and uv spectrum of)
RN 31158-37-9 CAPLUS
CN p-Octiphenyl, 2'''''',3,3',3''''''-tetramethyl- (8CI) (CA INDEX NAME)



L12 ANSWER 69 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1969:465940 CAPLUS
DOCUMENT NUMBER: 71:65940
TITLE: Decay time of pseudo isocyanine diethyl chloride measured with a 200 Mhz light modulation phase fluorometer
AUTHOR(S): Michelbauer, Ernst
CORPORATE SOURCE: Univ. Giessen, Giessen, Fed. Rep. Ger.
SOURCE: Zeitschrift fuer Naturforschung, Teil A: Astrophysik, Physik und Physikalische Chemie (1969), 24(5), 790-6
CODEN: ZENAAU; ISSN: 0044-3166
DOCUMENT TYPE: Journal
LANGUAGE: German
AB The decay time of pseudoisocyanine diethyl chloride (2.2 nsec. at room temp.) was measured by a phase fluorometer of 200 MHz. modulation frequency, and its temp. dependence and self-absorption were studied. The mol. decay time is 1.7 nsec. Four mols. form the fluorescent polymer of the dye. Decay times of p-oligophenylenes and the quenching effect of PhNO2 in cyclohexane on 2,2'-p-phenylenebis[5-phenyloxazole] (POPOP) (1.82 nsec.) were detd. (.tau. nsec. given): 3,3'''-dimethyl-p-quaterphenyl, 1.36 .+-. 0.04; 3-methyl-p-quaterphenyl, 0.87 .+-. 0.03; 2-methyl-p-quaterphenyl, 1.39 .+-. 0.04; 2,2'''-dimethyl-p-quinquephenyl, 1.29 .+-. 0.04; 2,2''''-diethyl-p-quinquephenyl, 1.16 .+-. 0.04; 3,3',2'''',3''''''-tetramethyl-p-sexiphenyl, 0.76 .+-. 0.03; 3,3',2''''',3''''''-tetramethyl-p-septiphenpl, 0.79 .+-. 0.03; I (R = hexahydrofarnesyl), 1.32 .+-. 0.04; II, 6.2 .+-. 0.8.
IT **24146-30-3**
RL: PRP (Properties)
(fluorescence of, decay of)
RN 24146-30-3 CAPLUS
CN p-Septiphenyl, 2''''',3,3',3''''''-tetramethyl- (7CI, 8CI) (CA INDEX NAME)



L12 ANSWER 70 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1968:478208 CAPLUS
DOCUMENT NUMBER: 69:78208
TITLE: Gel chromatography. V. Dependence of separation efficiency on experimental conditions
AUTHOR(S): Heitz, Walter; Coupek, Jiri
CORPORATE SOURCE: Univ. Mainz, Mainz, Fed. Rep. Ger.
SOURCE: Journal of Chromatography (1968), 36(3), 290-301
CODEN: JOCRAM; ISSN: 0021-9673
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The sepn. efficiency of various gels under various exptl. conditions was described, using reduced quantities, by a single equation derived from Van Deemter's equation (1956) and deviations were caused by changes of diffusion coeff. within the gel, with respect to the mobile phase. The gel chromatog. of p-oligophenylenes on poly(vinyl acetate) (I) and polystyrene (II) gels, crosslinked in various ways, was examd. p-Oligophenylenes with diffusion coeffs. of 2.7-0.59 cc./sec. were examd. on I gels crosslinked with butanediol divinyl ether (III) or divinyl adipate (IV) and poly(styrene-divinylbenzene) gels prepd. by suspension polymn. Gels were fractionated to obtain a narrow particle distribution. The reduced sepn. efficiency of a I gel crosslinked with 5% III for tetrahydrofuran solns. of C6H6, m-bitolyl, quaterphenyl, quinquephenyl, and octiphenyl showed no dependence on particle diam. Similar expts. on a I gel crosslinked with 1.6% IV and II, crosslinked with 1.6% divinylbenzene, with low crosslink d., showed no dependence of sepn. on mol. wt. of the materials used. For gels with higher crosslink d., sepn. efficiency increased with increasing solute mol. wt. showing the influence of a varying permeation coeff. on sepn. A restriction of diffusion effect was caused by obstruction in the gel network, and, in case of high crosslink d., by elution vol. of the solute approaching the void vol. The reduced sepn. efficiency of a macroporous gel of I copolymd. with 22.5 mole % IV in 66% n-heptanol was independent of the material sepd.
IT **5174-04-9 5575-76-8**
RL: PROC (Process)
(sepn. of, from p-oligophenylenes, by gel chromatog.)
RN 5174-04-9 CAPLUS
CN p-Deciphenyl, 2'',2'''',2''''''',2''''''''',3,3',3''',3''''',3''''''',3''''''''''-decamethyl- (7CI, 8CI) (CA INDEX NAME)

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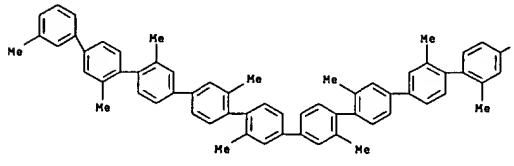

L12 ANSWER 70 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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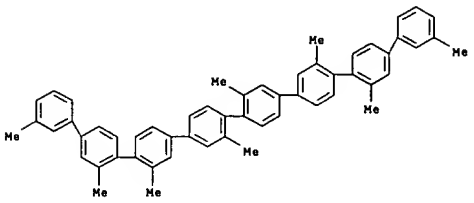
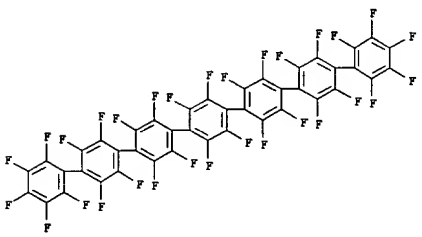
RN 5575-76-8 CAPLUS
CN p-Octiphenyl, 2'',2'''',2''''''',3,3',3''',3''''',3'''''''-octamethyl- (6CI, 7CI, 8CI) (CA INDEX NAME)



L12 ANSWER 71 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)



RN 18606-18-3 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''-Septiphenyl, 2,2',2'',2''',2'''',2''''',2''''''-triacontafluoro- (9CI) (CA INDEX NAME)

L12 ANSWER 71 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:	1968:59245 CAPLUS
DOCUMENT NUMBER:	68:59245
TITLE:	Fluorinated polyphenyls
INVENTOR(S):	Fear, Ernest J. P.; Thrower, John
PATENT ASSIGNEE(S):	Minister of Technology, London
SOURCE:	Brit., 4 pp. CODEN: BRXXAA
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 1100261		19680124	GB	19630715

AB Highly fluorinated polyphenylenes are prepd. by treating a compd. contg. a perfluorinated phenyl or polyphenyl group with a Grignard reagent contg. a perfluorinated phenyl or polyphenyl group, in tetrahydrofuran (I) solvent. Thus, 10.75 g. Mg turnings in 37.5 ml. dry I were cooled to -12.degree. and 8.65 g. bromopentafluorobenzene (II) in 56 ml. I was added rapidly with stirring. The temp. was held at .ltoreq.1.5.degree. with a -70.degree. cooling bath. The mixt. was stirred at 0.degree. for 30 min., cooled to -10.degree., filtered, dild. to 115 ml. with I, and added to 23.4 g. decafluorobiphenyl (III) in 110 ml. dry I under N over 40 min. at .ltoreq.21.degree.. After standing 21 hrs., the soln. was poured into 2 l. water and the white ppt. was collected, washed with water, dried, and sublimed in vacuo to give the following compds. (compd., sublimation temp./mm., g. wt. of fraction, and m.p. of fraction given): III, 70-80.degree./20, 16.95, -; Perfluoro-p-terphenyl, 115-30.degree./0.05, 4.08, 193-4.degree.; perfluoro-p-quaterphenyl, 160.degree./0.05, 0.82, 233.0-4.5.degree.; perfluoro-p-quinquephenyl, 200.degree./0.05, 0.34, 299-304.degree.. Treating II with 10M excess PhMgBr gave polymeric products, insol. in I, of the formula C6F5(C6F4)nC6F5, contg. mainly para linkages (n, % of total polymer, sublimation temp. in vacuo, and m.p. given): -, 2.4, .ltoreq.250.degree., 307-9.degree.; 5, 51.9, 250-300.degree., .gtoreq.340.degree.; 6, 4.2, 300-50.degree., .gtoreq.411.degree.; 23, 38.0, .gtoreq.350.degree., .gtoreq.423.degree.. A mixt. of 9.27 g. II, 95 g. Mg turnings, and 200 ml. I under dry N was cooled to -54.degree., and 64.86 g. II in 600 ml. I was added dropwise over 30 min. The exothermic reaction was maintained at .ltoreq.-24.degree. by a -70.degree. cooling bath. Stirring was continued for 1.75 hrs. at -30.degree., after which the mixt. was kept 1 hr. and filtered on glass paper under N. The filtrate was then refluxed 8 hrs. under N, hydrolyzed with 400 ml. 2N HCl, added to water, and filtered. The resulting residue was washed, and gave 25.65 g. ochre powder which was 95% sol. in I. The use of hexafluorobenzene and perfluoroterphenyl in the process is also claimed. The use of a Grignard reagent based on biphenyl gives a polyphenylene contg. a large proportion of m-phenylene linkages.

IT **17221-18-0P 18606-18-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 17221-18-0 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''-Septiphenyl, 2,2',2'',2''',2'''',2''''',2''''''-triacontafluoro- (9CI) (CA INDEX NAME)

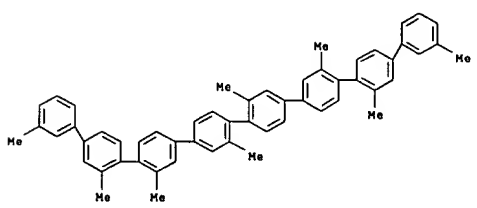
L12 ANSWER 72 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:	1968:30731 CAPLUS
DOCUMENT NUMBER:	68:30731
TITLE:	Gel chromatography. III. Separating efficiency
AUTHOR(S):	Heitz, Walter; Coupek, Jiri
CORPORATE SOURCE:	Univ. Mainz, Mainz, Fed. Rep. Ger.
SOURCE:	Makromolekulare Chemie (1967), 105(1), 280-4 CODEN: MACEAK; ISSN: 0025-116X
DOCUMENT TYPE:	Journal
LANGUAGE:	German

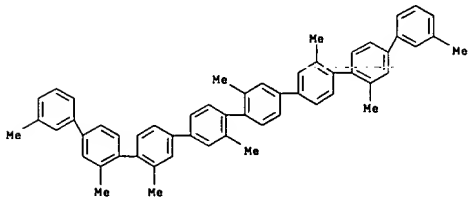
AB In gel chromatog., the sepg. efficiency is influenced by the chem. nature of the gel, the elution component, and the test substance. As gels, polystyrene (I alone or crosslinked with 5 or 10% divinylbenzene (II) and poly(vinyl acetate) crosslinked with 8% butanediol divinyl ether (III) were tested for the sepn. of benzene, bi-m-tolyl, 2,2'-dimethyl-4,4'-di-m-tolylbiphenyl, 2,2"-dimethyl-4,4"-di-m-tolyl-p-terphenyl, and IV. Expts. showed that by using III or I gels, tetrahydrofuran as the elution compd., and the oligophenyls, the diffusion const. of the test substance was the normalizing value, while the particle size of the gel did not influence the sepn. However, in a system with I, an interaction between the gel and diffusion hindrance is responsible, through the crosslinking d., for the sepn. efficiency.

IT **5575-76-8**
RL: USES (Uses)
(chromatog. (gel) of, on styrene polymers crosslinked with divinylbenzene and on vinyl acetate polymers crosslinked with bis(vinyloxy)butane)

RN 5575-76-8 CAPLUS
CN p-Octiphenyl, 2'',2'''',2''''''',3,3',3''',3''''',3'''''''-octamethyl- (6CI, 7CI, 8CI) (CA INDEX NAME)



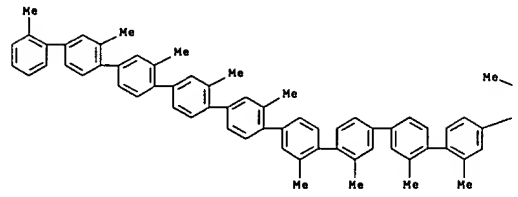
L12 ANSWER 73 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1967:411280 CAPLUS
DOCUMENT NUMBER: 67:11280
TITLE: Poly- and oligophenylenes. XIX. Synthesis of methyl substituted p-oligophenylenes by oxidative coupling of Li organo compounds
AUTHOR(S): Heitz, Walter; Ullrich, Rudolf
CORPORATE SOURCE: Univ. Mainz, Mainz, Germany
SOURCE: Makromolekulare Chemie (1966), 98, 29-41
CODEN: MACEAK; ISSN: 0025-116X
DOCUMENT TYPE: Journal
LANGUAGE: German
AB cf. CA 64: 19529g. The p-substituted iodine-compds., I, II, and III (CA 63: 6889g) were converted into the Li derivs. IV, V, and VI by reaction with BuLi; in ether the exchange takes only a few min. 2,3'2",3"',2"",3"",3""'-Octamethyl - p - octaphenyl (VII) was prepd. by dissolving 20 g. II in 125 ml. ether and adding 0.05 mole BuLi in petroleum ether at 0.degree.. After 15 min., 7.5 g. CuCl2 was added and the reaction brought to an end by heating briefly. The filtration residue was boiled several times with PhMe after which solvent and PhMe were distd. under 1 atm. and the main portion of the quaterphenyl removed in vacuo to yield 5 g. VII, m. 260.degree.. Further purification through an Al2O3 column (3 times) yielded .apprx.2 g. of thin layer chromatographically pure VII, m. 273.degree.. 2,3',2",3"',2"",3"",2"'",3""',2"'",3"'",2"'"",3"'"",3"'"'' - Dodecamethyl - p - duodeciphenyl (VIII) was prepd. by co-condensing V and VI in a 2:1 mol. ratio, starting with III and II. Purification by chromatographic sepn. (3:1 C6H14-C6H6) gave VIII, m. 290.degree.. Condensation of IV and VI should lead to linear p-polyphenylenes. Side reactions occur in ethers as tetrahydrofuran; in benzene there are no side reactions, but polycondensation is slow and the yield low (4%). The benzene insol. fractions are p-linked linear polymers, m. >375.degree..
IT **5575-76-8P 14745-19-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 5575-76-8 CAPLUS
CN p-Octiphenyl, 2'',2'''',2''''',3,3',3''',3'''',3''''''-octamethyl- (6CI, 7CI, 8CI) (CA INDEX NAME)



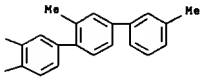
RN 14745-19-8 CAPLUS

L12 ANSWER 73 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)
CN p-Dodeciphenyl, 2'',2'''',2''''',2''''''',2'''''''',3,3',3''',3'''',3''''''',3''''''''',3'''''''''-dodecamethyl- (8CI) (CA INDEX NAME)

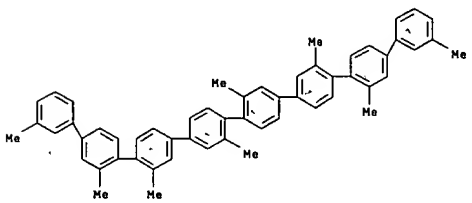
PAGE 1-A



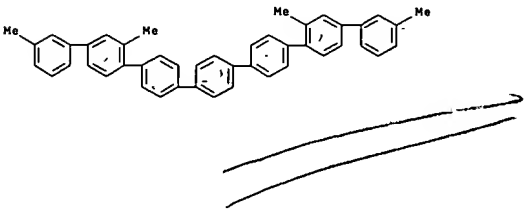
PAGE 1-B



L12 ANSWER 74 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1965:484459 CAPLUS
DOCUMENT NUMBER: 63:84459
ORIGINAL REFERENCE NO.: 63:15582f-g
TITLE: Diffusion investigations of substances with a rod-like molecular shape
AUTHOR(S): Claesson, S.; Kern, W.; Norberg, P. H.; Heitz, W.
CORPORATE SOURCE: Univ., Uppsala, Swed.
SOURCE: Makromolekulare Chemie (1965), 87, 1-7
CODEN: MACEAK; ISSN: 0025-116X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Diffusion coeffs. of various Me substd. p-oligophenylenes in toluene were measured, p-Oligophenylenes have a rodlike mol. shape. Although the oligophenylene mols. are of comparable size with the solvent mols., the results are in good agreement with Kuhn's equations derived by hydrodynamic considerations. From these equations the length of the mols. can be calcd., and the values are as expected from known mol. data. The hydrodynamic treatment is a good approxn. even with small mols.
IT **5575-76-8**, p-Octiphenyl, 2'',2'''',2''''',3,3',3''',3'''',3''''' ''-octamethyl-
(diffusion in toluene, mol. size and)
RN 5575-76-8 CAPLUS
CN p-Octiphenyl, 2'',2'''',2''''',3,3',3''',3'''',3''''''-octamethyl- (6CI, 7CI, 8CI) (CA INDEX NAME)

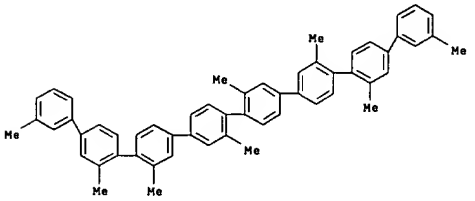


L12 ANSWER 75 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1964:30607 CAPLUS
DOCUMENT NUMBER: 60:30607
ORIGINAL REFERENCE NO.: 60:5363a-d
TITLE: Synthesis of methyl and methylene substituted p-oligophenylenes by a cocondensing Ullmann reaction. XII
AUTHOR(S): Wirth, H. O.; Goenner, K. H.; Stueck, R.; Kern, W.
CORPORATE SOURCE: Univ. Mainz, Germany
SOURCE: Makromolekulare Chemie (1963), 63, 30-52
CODEN: MACEAK; ISSN: 0025-116X
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. CA 55, 7349a; 57, 1029e. In the Ullmann cocondensing reaction, a bifunctional iodine compd. is treated with a large excess of monofunctional component. By this reaction, Me-substituted p-oligophenylenes ranging from p-terphenyl to p-septiphenyl and oligophenylenes with terminally or middle-positioned fluorene residues are prepd. The optimum mole ratio of monofunctional compd. to bifunctional compd. is 8-10 to 1 and optimum Cu amt. is 3.5-4 g-atoms of powd. Cu per 1 g.-atom of org. bound iodine. Furthermore, a biphenyl hydrocarbon, such as biphenyl or bitolyl, and a small quantity of Hg is used. Reaction is carried out in N atm., at slightly elevated pressure, at 190-240.degree.. The following 20 oligophenylenes were synthesized, crystd., and their m.p. (given) was detd.: 22,33-dimethyl-p-quaterphenyl, 141.degree.; p-quinquephenyl, high blue fluorescence, 395.degree.; 22,43-dimethyl-p-quinquephenyl, highly fluorescent needles, 215.degree.; 13,32-dimethyl-pterphenyl, needles, 146.degree.; 13,42-dimethyl-p-quaterphenyl, platelets, 149-150.degree.; 13,52-dimethyl-p-quinquephenyl, fluorescent platelets, 213.degree.; 13,23,32,42-tetramethyl-p-quaterphenyl, 84.degree.; 13,22,33,42-tetramethyl-p-quaterphenyl, 95-6.degree.; 12,33-dimethyl-p-terphenyl, 140-1.degree.; 12,43-dimethyl-p-quaterphenyl, 213.degree.; 12,53- dimethyl-p-quinquephenyl, highly fluorescent platelets, 313.degree.; 12,22,33,43-tetramethyl-p-quaterphenyl, fluorescent platelets, 138-9.degree.; 12,23,4253-tetramethyl-p-quinquephenyl, 186.degree.; 12,23,32,43tetramethyl-p-quaterphenyl, 69-71.degree.; 12,23,52,63-tetramethyl-p-sexiphenyl, 199-200.degree.; 12,23,62,73-tetramethyl-p-septiphenyl, highly fluorescent platelets, 261.degree.; 13,22:33,42 dimethylene p quaterphenyl, fluorescent platelets, 307.degree., 23,32-methylene-p-quaterphenyl, fluorescent platelets, 285.degree.; 13,42-dimethyl-23,32-methylene-p-quaterphenyl, fluorescent needles, 159.degree.; 12,43-dimethyl-23,32-methylene-p-quaterphenyl, fluorescent platelets, 193.degree..
IT **24146-30-3**, p-Septiphenyl, 2''''',3,3',3''''''-tetramethyl-
(prepn. of)
RN 24146-30-3 CAPLUS
CN p-Septiphenyl, 2''''',3,3',3''''''-tetramethyl- (7CI, 8CI) (CA INDEX NAME)



L12 ANSWER 75 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

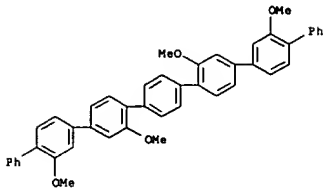
L12 ANSWER 76 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1963:6584 CAPLUS
DOCUMENT NUMBER: 58:6584
ORIGINAL REFERENCE NO.: 58:1061e-g
TITLE: p-Oligophenylene studies
AUTHOR(S): Wirth, H. O.
CORPORATE SOURCE: Univ. Mainz, Germany
SOURCE: Luminescence Org. Inorg. Mater., Intern. Conf., New York (1962), Volume Date 1961 226-9
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB The larger I are much more sol. in org. solvents than mols. of unsubstituted polyphenyls. The soly. of I (n = 3) in toluene at 20.degree. is 87 g./l. The ultraviolet absorption max. of I (n = 1, 2, 3, 4) are 254, 269, 277, and 281 m.mu. (CHCl3), converging to a limiting value of 287 m.mu.. The limiting value for unsubstituted polyphenyls is 344 m.mu.. This was interpreted in terms of coplanarity of the unsubstituted derivs. The sparingly sol. oxidobiphenyl (dibenzofuran), dioxido-p-terphenyl, and trioxido-p-quaterphenyl exhibit max. at 298, 340, and 365 m.mu. (.epsilon. 10,000, 35,000, 88,000) (CHCl3), resp., in agreement with this explanation.
IT 5575-76-8, p-Octiphenyl, 2'',2'''',2''''''',3,3',3''',3''''',3''''' ''-octamethyl-
(luminescence and spectrum of)
RN 5575-76-8 CAPLUS
CN p-Octiphenyl, 2'',2'''',2''''''',3,3',3''',3''''',3'''''''-octamethyl- (6CI, 7CI, 8CI) (CA INDEX NAME)



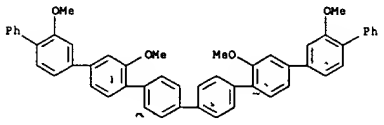
L12 ANSWER 77 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1961:70518 CAPLUS
DOCUMENT NUMBER: 55:70518
ORIGINAL REFERENCE NO.: 55:13364e-i,13365a-h
TITLE: The synthesis of methoxyl-substituted p-oligophenylenes. VI
AUTHOR(S): Kern, W.; Ebersbach, H. W.; Ziegler, I.
CORPORATE SOURCE: Univ. Mainz, Germany
SOURCE: Makromolekulare Chemie (1959), 31, 154-80
CODEN: MACEAX; ISSN: 0025-116X
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. CA 49, 10898d. Polyphenylenes, having MeO substituents, were synthesized in order to provide rigid mols. as polymer models having better soly. than unsubstituted analogs. Treatment of 3,5-dimethoxybenzamide with alk. hypochlorite soln. in the cold and finally at 80.degree. gave 70% 3,5-dimethoxyaniline (I), m. 52.degree.. Diazotization of I followed by mixing with aq. NaI at room temp. and warming to 80.degree. gave 56% 3,5-(MeO)2C6H3I (II), oily solid, purified by extn. with NaHSO3, m. 75.degree.. Heating a mixt. of 10 g. II and 30 g. powd. Cu with 10 g. more powd. Cu in an N atm. 30 min. at 200-60.degree. gave 3.2 g. 3,5,3',5'-tetramethoxybiphenyl (III), m. 108.degree.. PhLi (8.1 g.) and 19 g. 1,3-(MeO)2C6H4 (IV) in 100 ml. Et2O kept 24 hrs. at room temp. under N, warmed 6 hrs. with 12 g. cyclohexanone (V) in 25 ml. Et2O, the mixt. decompd. with H2O, dried, and distd. gave a fraction (VI), b0.5 126-8.degree.. VI treated with 50 ml. warm AcCl, the excess AcCl distd., and the residue poured onto ice gave 12 g. 2,6-dimethoxyphenyl-1-cyclohexene (VII), m. 90-1.degree.. VII (2.5 g.) was heated 48 hrs. at reflux with 6.1 g. chloranil (VIII) in 50 ml. xylene to give after extn. with NaOH-Na2S2O4 2.1 g. 2,6-dimethoxybiphenyl (IX), m. 88-9.degree.. IX, also prepd. from IV, PhLi, and PhI, b3 150.degree.. Similarly, IV, PhLi, and 1,4-cyclohexanedione (X) gave 13,5,32,6-tetramethoxy-2I,4-dihydroxy-2-perhydro-p-terphenyl (XI), m. 190-205.degree.; wide m.p. ranges in this series were due to stereochem. mixts. [For nomenclature cf. ibid. 29, 164(1959)]. Dehydration of XI with hot AcCl gave 92% of 13,5,32,6-tetramethoxy-22,3-dihydro-p-terphenyl, m. 220-4.degree., converted by VIII into 13,5, 32,6-tetramethoxy-p-terphenyl, m. 278.degree.. II (20 g.) treated with 2 g. Mg under N formed a Grignard reagent, to which was added 3.2 g. X; the mixt. was heated 30 min. and quenched with H2O. Evapn. of solvent from the org. layer and dehydration of the residue with hot AcCl gave 1.6 g. 12,6,33,5-tetramethoxy-22,3-dihydro-p-terphenyl, m. 138-42.degree., aromatized with VIII to 12,633,6-tetramethoxy-p-terphenyl, m. 160.degree., whose solns. in aromatic hydrocarbons or CHCl3 have violet fluorescence. From III, PhLi, and Ph2CO was obtained 55% 4,4'-bis(.alpha.-hydroxybenzhydryl)-3,5,3',5'-tetramethoxybiphenyl, m. 244.degree.. III, PhLi, and BrCH2CH2Br gave 67% 4,4'-dibromo-3,5,3',5'-tetramethoxybiphenyl, m. 260.degree.. From IIII, PhLi, and V was prepd. 26% 22,6,33,5-tetramethoxy-14,41-dihydroxy-1,4-perhydro-p-quaterphenyl, m. 196-200.degree., converted with AcCl into 22,633,5-tetramethoxy-11,2,3,6,42,3,4,5-octahydro-p-quaterphenyl (XII), m. 178-80.degree.. XII with VIII gave 22,6,33,5 - tetramethoxy - p - quaterphenyl, m. 242.degree.. From 1,2,4,5-(MeO)4C6H2, PhLi, and Ph2CO was obtained 13% 1,4 - bis(.alpha. - hydroxybenzhydryl) - 2,3,5,6 - tetramethoxybenzene, m. 245-52.degree.; Ph3COH and starting materials were also recovered. From 5.2 g. 4,4' - diiodo - 3,3' - dimethoxybiphenyl (XIII) and 2.5 g. PhLi was obtained on quenching and vacuum distn. 89% 3,3'-dimethoxybiphenyl, m. 36.degree.. XIII (2.6 g.), 1.3 g. PhLi, and 2.7 g. Ph2CO gave 2.7 g. 4,4'-bis(.alpha.-hydroxybenzhydryl)-3,3'-dimethoxybiphenyl, m. 258-9.degree.. Use of half quantities of PhLi in the preceding two reactions gave, resp., 4-iodo-3,3'-dimethoxybiphenyl (XIV), m. 96.degree., and 4-iodo-4'-(.alpha.-hydroxybenzhydryl)-3,3'-

L12 ANSWER 77 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)
dimethoxybiphenyl, m. 178-9.degree.. XIII (7 g.), 3.4 g. PhLi, and 8 g. V gave 4.4 g. 22,33-dimethoxy-14,41-dihydroxy-1,4-perhydro-p-quaterphenyl, m. 192-3.degree., dehydrated with AcCl to 22,33dimethoxy-11,2,3,6,42,3,4,5-octahydro-p-quaterphenyl, m. 138-9.degree., transformed with VIII to 22,33-dimethoxy-p-quaterphenyl, m. 183-4.degree.. XIII, PhLi, and 4-phenylcyclohexanone (XV) gave 32,43-dimethoxy-24,51-dihydroxy-2,5-perhydro-p-sexiphenyl, m. 241-3.degree., converted with AcCl to 32,43-dimethoxy-21,2,3,6,52,3,4,5-octahydro-p-sexiphenyl (XVI), m. 203-5.degree.. XVI with VIII gave 32,43-dimethoxy-p-sexiphenyl, m. 231-3.degree., whose solns. show blue-violet fluorescence. By successive condensation, dehydration with AcCl, and aromatization with VIII were prepd. 13,32-dimethoxy-21,4-dihydroxy-2-perhydro-p-terphenyl [from o-iodoanisole (XVII), PhLi, and XI m. 200-1.degree.; 13,32-dimethoxy-22,3-dihydro-p-terphenyl, m. 204.degree., whose solns. have blue fluorescence; 13,32-dimethoxy-p-terphenyl, m. 193-5.degree., with blue-violet fluorescent solns; 13-methoxy-21-hydroxy-2-perhydro-p-terphenyl [from XVII, PhLi, and XV), m. 123-5.degree.; 13-methoxy-22,3,4,5,-tetrahydro-p-terphenyl, m. 99-100.degree.; 13-methoxy-p-terphenyl, m. 113-14.degree.; 13,42-dimethoxy-21,34-dihydroxy-2,3-perhydro-p-quaterphenyl [from XVII, PhLi, and bicyclohexyl-4,4'-dione (XVIII)], m. 205-6.degree.; 13,42-dimethoxy-22,3,4,5,,31,2,3,6-octahydro-p-quaterphenyl, m. 151-2.degree.; 13,42-dimethoxy-p-quaterphenyl, m. 190-2.degree., with blue fluorescence in PhMe solns.; 4-(.alpha.-hydroxybenzhydryl)3,3'-dimethoxybiphenyl (from XIV, PhLi, and Ph2CO), m. 140-2.degree.; 12,23-dimethoxy-31-hydroxy-3-perhydro-p-terphenyl (from XIV, PhLi, and V), m. 66-8.degree.; 12,23-dimethoxy-32,3,4,5-tetrahydro-p-terphenyl, and oil; 12,23-dimethoxy-p-quaterphenyl, m. 64-5.degree.; 12,23-dimethoxy-32,3,4,5-tetrahydro-p-quaterphenyl (from XIV, PhLi, and XV, followed by AcCl treatment), m. 89-90.degree.; 12,23-dimethoxy-p-quaterphenyl, m. 98.degree., with blue-violet fluorescence in PhMe soln.; 12,23,42,53-tetramethoxy-31,4-dihydroxy-3-perhydro-p-quinquephenyl (from XIV, PhLi, and X), m. 196-7.degree.; 12,23,42,53- tetramethoxy-32,3-dihydro-p-quinquephenyl, yellow crystals, m. 136-9.degree.; 12,23,42,53-tetramethoxy-p-quinquephenyl, m. 164-5.degree., with blue-violet fluorescent solns.; 12,23,52,63-tetramethoxy-31,44-dihydroxy-3,4-perhydro-p-sexiphenyl (from XIV, PhLi, and XVIII), m. 173-5.degree.; 12,23,52,63-tetramethoxy-32,3,4,5,41,2,3,6-octahydro-p-sexiphenyl, m. 169-70.degree.; 12,23,52,63-tetramethoxy-p-sexiphenyl, m. 208-10.degree.; 22,33,52, 63-tetramethoxy-41,4-dihydroxy-4-perhydro-p-septiphenyl [from 11-iodo-12,23-dimethoxy-p-terphenyl (XIX), PhLi, and X], m. 234-7.degree.; 22,33,52,63-tetramethoxy-42,3-dihydro-p-septiphenyl, m. 219-20.degree.; 22,33,52,63-tetramethoxy-p-septiphenyl, m. 251-3.degree., strongly blue-violet fluorescent in soln.; 22,33,62,73-tetramethoxy-p-octiphenyl (from XIX, PhLi, and XVIII, followed by AcCl and VIII; intermediates not isolated), m. 276-7.degree., strongly blue-violet fluorescent in soln. The prepn. of XIX was not described. The soly. of the methoxy-substituted poly-p-phenylenes was in many cases not very high, and the methyl-substituted compds. described in the earlier paper were more favorable as models for high mol. wt. systems.
IT 108676-20-6, p-Septiphenyl, 2',2'''',3'',3'''''-tetramethoxy-
109367-22-8, p-Octiphenyl, 2',2,''''3'',3''''''-tetramethoxy-
(prepn. of)
RN 108676-20-6 CAPLUS
CN p-Septiphenyl, 2',2'''',3'',3'''''-tetramethoxy- (6CI) (CA INDEX NAME)

L12 ANSWER 77 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

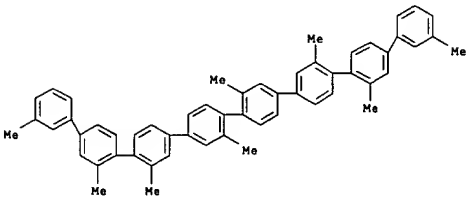


RN 109367-22-8 CAPLUS
CN p-Octiphenyl, 2',2''''',3'',3''''''-tetramethoxy- (6CI) (CA INDEX NAME)



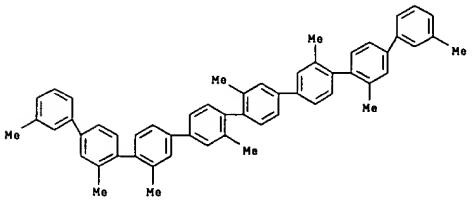
L12 ANSWER 78 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1961:37891 CAPLUS
DOCUMENT NUMBER: 55:37891
ORIGINAL REFERENCE NO.: 55:7349h-i,7350a-d
TITLE: Intramolecular free radical arylation and related reactions
AUTHOR(S): De Tar, De Los F.; Chu, Chin-Chiun
CORPORATE SOURCE: Univ. of South Carolina, Columbia
SOURCE: Journal of the American Chemical Society (1960), 82, 4969-74
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. CA 51, 13820c. In the decompn. of acyl peroxides, competing intramol. and solvent reactions were studied and the results compared with corresponding Gomberg-Bachmann reactions. o-(1-Naphthyl)benzoyl chloride (m. 74.5-75.degree.)(C6H6-hexane), gave the peroxide (m. 108-15.degree.) 75% titer, remainder anhydride. After a week in hot C6H6, no CO2 had been evolved, and the products found were the starting acid, a small amt. of phenolic lactone, and 0.42 mole/mole peroxide of the lactone (I) [m. 154.5-60.degree. (C6H6-MeOH)] of o-(2-hydroxy-1-naphthyl)benzoic acid. I (m. 160.5-62.degree.) was also prepd. by the Ullmann reaction of 1-iodo-2-methoxynaphthalene, (m. 86-8.degree.) and o-IC6H4CO2Me (II), alk. hydrolysis, and HI-AcOH cleavage of the Me ether, m. 221-2.degree.. Ullmann reaction of II and 2-iodobiphenyl (III), yielded o-terphenyl-2-carboxylic acid m. 125.5-6.5.degree. (Et2O); S-benzylthiuronium salt m. 155-6.degree.. IV heated overnight on a water bath with SOCl2 gave 4-phenylfluorenone [m. 110-12.degree. (C6H6-MeOH)], and at 30-60.degree. gave the anhydride. In precisely controlled conditions, IV with AcCl, added in Et2O to cold aq. Na2O2, gave 30% of 99.5% peroxide (V). At 79.1.degree. in C6H6, V decompd. at the rate 3.4 .times. 10-4 sec.-1 After 64 hrs. at 70.degree., the products were: CO2 (approx. 1 mole/mole peroxide); an acidic fraction, largely nonvolatile; and a neutral fraction, contg. 0.56 mole/mole triphenylene (VI) [m. 198-9.degree. (C6H6-EtOH)], free from o-terphenyl and o-quaterphenyl. Similarly, in CCl4, V gave the starting acid, VI, the lactone [m. 171-3.degree. (C6H6-MeOH)] of 2-hydroxy-o-terphenyl-2-carboxylic acid, C2Cl6, and no 2-chloro-o-terphenyl. In CBrCl3, 2-bromo-o-terphenyl (VII) was also detected by vapor phase chromatography. o-ClC6H4NO2 and III with Cu bronze at 230-70.degree. gave, after extensive purification, 2-nitro-o-terphenyl [m. 93-4.degree. (MeOH)] reduced over Pd-C to the 2-amino deriv. (VIII), m. 75-6.degree. (EtOH); di-Ac deriv. with AcCl in C6H6N m. 179-80.degree. (EtOH). The diazonium fluoborate of VIII was decompd. in acid soln. with or without Cu or CuCl, and the chloride in alk. soln. with Cu, C6H6, CCl4, or CBrCl3. The yield of triphenylene dropped in the alk. solns., but in each case triphenylene was the major product. In acid, small amts. of 2-hydroxy-o-terphenyl were found; in alk. with CBrCl3, VII was formed in 27-9% yield, although the Sandmeyer reaction gave only VI; terphenyl, also prepd. from III and PhI [m. 56-7.degree. (hexane)] was only found with alk. Cu. Repetition of the decompn. of 2-BzC6H4N2+ with alk. C6H6 gave 6% Ph2CO and 6% fluorenone as well as 2-PhC6H4Bz. Ultraviolet data were given for the reference compds.
IT **5575-76-8**, p-Octiphenyl, 2'',2'''',2''''''',3,3',3''',3''''',3''''' ''-octamethyl-
(prepn. of)
RN 5575-76-8 CAPLUS
CN p-Octiphenyl, 2'',2'''',2''''''',3,3',3''',3''''',3''''''',3''''''''-octamethyl-

L12 ANSWER 78 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)
(6CI, 7CI, 8CI) (CA INDEX NAME)



L12 ANSWER 79 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1961:37890 CAPLUS
DOCUMENT NUMBER: 55:37890
ORIGINAL REFERENCE NO.: 55:7349a-h
TITLE: Synthesis of methyl-substituted p-oligophenylenes
AUTHOR(S): Kern, W.; Gruber, W.; Wirth, H. O.
CORPORATE SOURCE: Univ. Mainz, Germany
SOURCE: Makromolekulare Chemie (1960), 37, 198-216
CODEN: MACEAK; ISSN: 0025-116X
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB (All phenylene groups were para). At 80.degree. 23.7 g. 3,3''-dimethylterphenyl in 600 cc. AcOH was dild. with H2O to turbidity (30 cc.), to this soln. at room temp. added 7.5 g. iodine, 3.6 g. KIO3, 8 cc. concd. H2SO4 and 10 cc. CCl4, the mixt. stirred at 80.degree. 4 hrs., after removal of most of the solvent in vacuo the product pptd. with H2O, filtered, and dissolved in C6H6 to leave 1.5 g. 4,4'''-diiodo-3,3''-dimethylterphenyl. The C6H6 soln. was passed over a column of basic Al2O3 and the product crystd. twice from BuOAc to give 20 g. 4-iodo-3,3''-dimethylterphenyl (I), m. 124.degree.. Similarly, 3,3',2'',3'''-tetramethylquaterphenyl gave 4,4'''-diiodo-3,3',2'',3'''-tetramethylquaterphenyl, m. 59.degree. (EtOAc), and a mixt. of 4-iodo-3,3',2'',3'''-tetramethylquaterphenyl and starting material (II). Hydroquinone (200 g.) in 400 cc. MeOH with 10 g. Raney Ni at 130.degree./100-150 atm. H was hydrogenated to 1,4-cyclohexanediol (III). Similarly, toluhydroquinone gave 81% 2-methylcyclohexane-1,4-diol (IV), b0.5 114-25.degree., 4,4'-dihydroxybiphenyl gave 90% bicyclohexyl-4,4'-diol (V), m. 203-5.degree., 3,3'-dimethyl-4,4'-dihydroxybiphenyl gave 3,3'-dimethylbicyclohexyl-4,4'-diol (VI), and 2,2'-dimethyl-4,4'-dihydroxybiphenyl gave 2,2'-dimethylbicyclohexyl-4,4'-diol (VII). III (20 g.) in 80 cc. 1:1 AcOH-Ac2O stirred at 5.degree. 3 hrs. with 25 g. CrO3 in 150 cc. Ac2O (Caution! Do not heat to bring about soln.), stirred at 25.degree. 12 hrs., the solvent removed in vacuo, the residue extd. with Et2O (Soxhlet), the solid which crystd. from the Et2O soln. purified by passing a CH2Cl2 soln. over neutral Al2O3, and the solvent removed gave 10 g. 1,4-cyclohexanedione (VIII), m. 78.degree.. In similar oxidns., IV gave 70% 2-methyl-1,4-cyclohexanedione (IX), m. 50.degree. (Et2O), b0.01 70-2.degree., V gave 73% bicyclohexyl-4,4'-dione (X), m. 114.degree. (C6H6-petr. ether), VI gave 71% 3,3'-dimethylbicyclohexyl-4,4'-dione (XI), b0.2 146-50.degree., and VII gave 71% 2,2'-dimethylbicyclohexyl-4,4'-dione (XII), b0.1 150-60.degree.. 4-Iodo-3,3'-dimethylbiphenyl (XIII) (20 g.) in 180 cc. Et2O under N was treated with 4.5 g. BuLi at -20.degree., warmed to room temp., cooled again to -20.degree., 6.5 g. 3-methylcyclohexanone in 40 cc. Et2O added dropwise, the whole stirred at room temp. several hrs., and decompd. with H2O. Removal of solvent left 18.8 g. yellow carbinol, which was dehydrated by boiling with 250 cc. Ac2O to give 7.6 g. 3,2',3''-trimethyltetrahydroterphenyl (XIV), b0.02 140-60.degree.. XIV (6.5 g.) was dehydrogenated with 11.6 g. chloranil by refluxing in 50 cc. xylene 48 hrs. After cooling, the soln. was extd. with 2N NaOH and dithionite soln. until the aq. phase remained colorless. The xylene soln. was passed over basic Al2O3 and distd. to give 4 g. 3,2',3''-trimethylterphenyl, b0.001 150-60.degree., which on treatment with n-hexane gave a solid, m. 50.degree.. By similar procedures XIII and IX gave 3,3',2'',2''',3''''-pentamethyldihydroquinquephenyl, m. 105-15.degree., and the corresponding quinquephenyl, m. 124-5.degree. (n-hexane), XII and XI gave 3,3',2'',3''',2''''',3'''''-hexamethyloctahydrosexiphenyl and the corresponding sexiphenyl, m. 141-2.degree. (n-hexane), XIII and XII gave 3,3',3'',2''',2''''',3'''''-hexamethyloctahydrosexiphenyl, m. 185-93.degree., and the corresponding sexiphenyl, m. 140.5.degree., I and XI gave an octahydrooctaphenyl and 3,3'',2''',3''''',2''''',3''''''-hexamethyloctaphenyl. m. 194-5.degree.

L12 ANSWER 79 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)
(C6H6-petr. ether), and I and XII gave 3,3'',3''',2'''',2''''',3'''''-hexamethyloctaphenyl, m. 203.degree. (C6H6-petr. ether). II (5 g.) and 3 g. Cu powder was heated at 230.degree. 1 hr. and then a short time at 270.degree.. Extn. with C6H6, purification of the ext. over basic Al2O3, removal of C6H6, and extn. with MeOH left 0.5 g. 3,3',2'',3''',2'''',3''''',2''''''-octamethyloctaphenyl, m. 256-9.degree.. Similarly, 4,4'-diiodo-3,3'-dimethylbiphenyl (4.34 g.) and 20.4 g. PhI gave 1.05 g. 2',3''-dimethylquaterphenyl, m. 141.degree..
IT **5575-76-8**, p-Octiphenyl, 2'',2'''',2''''''',3,3',3''',3''''',3'''''' ''-octamethyl- **120746-08-9**, p-Octiphenyl, 2''',2''''',3,3'',3''''',3'''''''-hexamethyl- **120747-29-7**, p-Octiphenyl, 2'''',2''''',3,3'',3''',3'''''''-hexamethyl- (prepn. of)
RN 5575-76-8 CAPLUS
CN p-Octiphenyl, 2'',2'''',2''''''',3,3',3''',3''''',3'''''''-octamethyl- (6CI, 7CI, 8CI) (CA INDEX NAME)



RN 120746-08-9 CAPLUS
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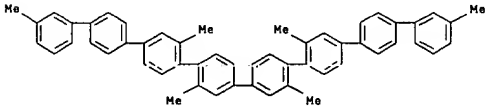
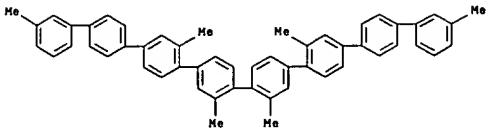
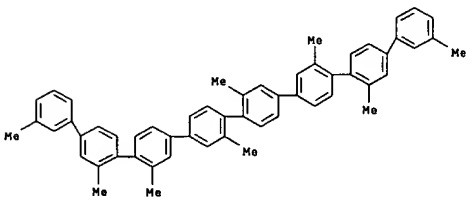


RN 120747-29-7 CAPLUS
CN p-Octiphenyl, 2'''',2''''',3,3'',3''',3'''''''-hexamethyl- (6CI) (CA INDEX NAME)

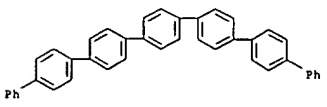
L12 ANSWER 79 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)



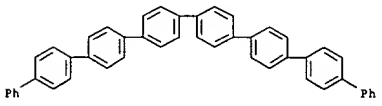
L12 ANSWER 80 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1959:105392 CAPLUS
DOCUMENT NUMBER: 53:105392
ORIGINAL REFERENCE NO.: 53:18908e-f
TITLE: Synthesis and properties of methyl-substituted p-oligophenylenes
AUTHOR(S): Kern, W.; Wirth, O. H.
CORPORATE SOURCE: Univ. Mainz, Germany
SOURCE: Kunststoffe-Plastics (1958), 6, 12-15
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB The oligomeric initial members of the series C6H6, biphenyl, terphenyl, etc., which exhibit a rod-like mol. shape and are practically insol., were studied. The objective was the improvement of soly. by lateral substitution. Ullman reaction and organometallo-carbonyl reaction were used for the synthesis. The methyl-substituted p-oligophenylenes produced show improved soly. and, in some cases, a tendency to produce oversatd. solns. The tetramethyl-p-quinquephenyl and tetramethyl-p-sexiphenyl show a high degree of fluorescence. The viscosity-concn. characteristics of these products were also studied.
IT **5575-76-8**, p-Octiphenyl, 2'',2'''',2''''''',3,3',3''',3''''',3'''''' ''-octamethyl- **70352-20-4**, p-Septiphenyl **70352-21-5**, p-Octiphenyl **120746-08-9**, p-Octiphenyl, 2''',2''''',3,3'',3''''',3'''''''-hexamethyl- **120747-29-7**, p-Octiphenyl, 2'''',2''''',3,3'',3''',3'''''''-hexamethyl- (prepn. and soly. of)
RN 5575-76-8 CAPLUS
CN p-Octiphenyl, 2'',2'''',2''''''',3,3',3''',3''''',3'''''''-octamethyl- (6CI, 7CI, 8CI) (CA INDEX NAME)



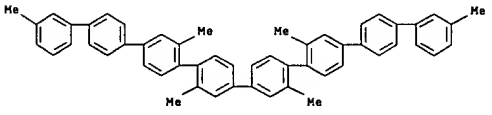
RN 70352-20-4 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''-Septiphenyl (9CI) (CA INDEX NAME)



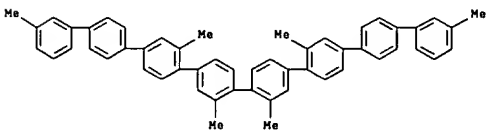
L12 ANSWER 80 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)
RN 70352-21-5 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1''''''':4''''''',1''''' ''-Octiphenyl (9CI) (CA INDEX NAME)



RN 120746-08-9 CAPLUS
CN p-Octiphenyl, 2''',2''''',3,3'',3'''',3'''''''-hexamethyl- (6CI) (CA INDEX NAME)

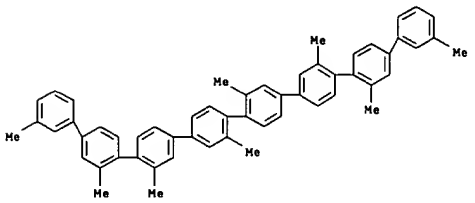


RN 120747-29-7 CAPLUS
CN p-Octiphenyl, 2'''',2''''',3,3'',3''',3'''''''-hexamethyl- (6CI) (CA INDEX NAME)

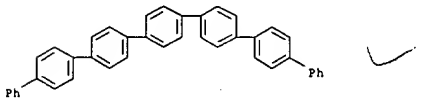


L12 ANSWER 81 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1959:105391 CAPLUS
DOCUMENT NUMBER: 53:105391
ORIGINAL REFERENCE NO.: 53:18907g-i,18908a-e
TITLE: Derivatives of benzoylresorcinol
AUTHOR(S): VanAllan, J. A.
CORPORATE SOURCE: Kodak Research Labs., Rochester, NY
SOURCE: Journal of Organic Chemistry (1958), 23, 1679-82
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB A new synthesis of [2,4-HO(MeO)C6H3]2-CO (I) was described. The compd. stated by Staudinger, et al. (C.A. 15, 3445) to be [2,4-(MeO)2C6H3]2CO (II) was shown to be [2,4-(MeO)2C6H3CO)2 (III). The ultraviolet absorption spectra of the compds. were discussed. m-C6H4(OMe)2 (IV) (75 g.) and 33 g. (COCl)2 (V) slowly heated to 170-80.degree. (HCl evolved), refluxed 1.5 hrs., and distd. gave 25 ml. IV, b6 98-100.degree., 30 ml. fraction, b0.4 200-10.degree., which, on recrystn. (EtOH), afforded 28 g. II, m. 135-6.degree. (2,4-dinitrophenylhydrazone m. 150.degree.), and from the distn. residue, an unidentified compd., m. 193-5.degree.. IV (35 ml.), 12.9 g. V, and 200 ml. (CH2Cl)2 (VI) cooled to 0.degree., treated with 30 g. AlCl3 with stirring below 15.degree., stirred 1 hr. at 15-20.degree., the temp. raised to 60.degree. for 0.5 hr., the mixt. cooled, the complex decompd. with cold dil. HCl, and the org. layer sepd., washed with H2O and dil. aq. NaOH, dried, and distd. gave 5 ml. IV and a fraction (VII), b1 240-60.degree.; VII recrystd. twice (EtOH) gave 19 g. III, m. 129-30.degree. (2,4-dinitrophenylhydrazone m. 185.degree.). III (6.0 g.) in 80 ml. VI treated with 11 g. AlCl3, heated 2 hrs. on the steam bath, decompd. with cold dil. HCl, the org. layer sepd., extd. with 10% aq. NaOH, the ext. acidified, the ppt. collected, dried, and recrystd. (BuOH) gave 4 g. [2,4-HO(MeO)C6H3CO2]2, m. 149-50.degree.. With 5.32 g. AlCl3 used in the above prepn., 14% 2,4-HO(MeO)C6H3COCOC6H3(OMe)2-2,4, m. 145-6.degree., was obtained. II demethylated as above (4 equivs. AlCl3) gave 59% I. 2-MeOC6H4COCl (28 g.) in 40 ml. IV heated to reflux temp. (vigorous reaction occurred and the heat source removed until the reaction subsided), the mixt. heated until HCl evolution ceased (1 hr.), and distd. gave 18 ml. IV, b5 95-100.degree., and 47.5 g. 2,4-(MeO)2C6H3COC6H4OMe-2 (VIII), b15 180-200.degree., n25D 1.608. VIII (13.6 g.) in 80 ml. VI treated with 20 g. AlCl3, heated 2 hrs. on the steam bath, decompd. with dil. HCl, the org. layer sepd., washed with H2O and dil. aq. NaOH, the alk. ext. acidified, extd. with (CH2Cl)2, the ext. concd. in vacuo, and the residual oil crystd. (C6H6) gave 4.1 g. 2,4-(HO)2C6H3COC6H4OH-2, m. 128.degree.. C5H5N.HCl (70 g.) and 21.0 g. VIII gently refluxed 4 hrs., poured into H2O, the ppt. collected, added to 100 ml. H2O which was then made alk. with 50% aq. NaOH, the soln. filtered, and the filtrate acidified, the ppt. (7.0 g.) suspended in 25 ml. warm Ac2O and a drop H2SO4 added, heating continued until soln. was complete, cooled, the ppt. collected, and recrystd. (C6H6) gave 7.0 g. 3-acetoxyxanthone (IX), m. 160.degree.. Sapon. of 19.0 g. IX gave 15 g. 3-hydroxyxanthone, m. 242.degree.. 3,6-Diacetoxyxanthone, m. 203-4.degree., was prepd. similarly from II. IV (57 g.) and 60 ml. AcCl refluxed 3 hrs. and distd. gave 32 g. 2,4-AcO(MeO)C6H3COMe, b5 155-60.degree., n20D 1.550, losing the Ac group in its conversion to a 2,4-dinitrophenylhydrazone (X), m. 230.degree.. 2,4-(MeO)2C6H3Ac (18 g.) in 70 ml. C6H6 treated with 29 g. AlCl3, after the vigorous reaction had subsided the mixt. heated 0.5 hr. on the steam bath, decompd. with ice-HCl, the C6H6 layer extd. with dil. alkali, the alk. layer acidified, and the resulting oil distd. gave 8 g.

L12 ANSWER 81 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)
2,4-HO(MeO)C6H3Ac (XI), b5 145-7.degree., m. 46-8.degree.; phenylhydrazone, m. 107-8.degree.; 2,4-dinitrophenylhydrazone, m. 230.degree.. Sapon. of X gave XI.
IT 5575-76-8, p-Octiphenyl, 2'',2''',2'''',2''''',3,3',3''',3''''',3'''''' ''-octamethyl- 70352-20-4, p-Septiphenyl 70352-21-5, p-Octiphenyl 120746-08-9, p-Octiphenyl, 2''',2''''',3,3'',3''',3'''''''-hexamethyl- 120747-29-7, p-Octiphenyl, 2'''',2''''',3,3'',3''',3'''''''-hexamethyl- (prepn. and soly. of)
RN 5575-76-8 CAPLUS
CN p-Octiphenyl, 2'',2'''',2''''',3,3',3''',3''''',3'''''''-octamethyl- (6CI, 7CI, 8CI) (CA INDEX NAME)

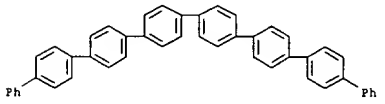


RN 70352-20-4 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Septiphenyl (9CI) (CA INDEX NAME)

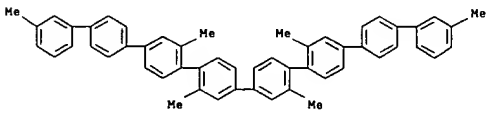


RN 70352-21-5 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1''''' ''-Octiphenyl (9CI) (CA INDEX NAME)

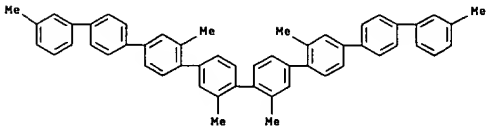
L12 ANSWER 81 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)



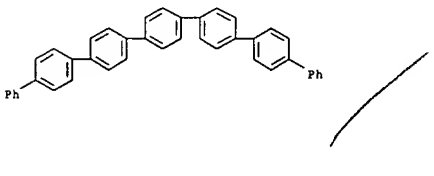
RN 120746-08-9 CAPLUS
CN p-Octiphenyl, 2''',2''''',3,3'',3'''',3'''''''-hexamethyl- (6CI) (CA INDEX NAME)



RN 120747-29-7 CAPLUS
CN p-Octiphenyl, 2'''',2''''',3,3'',3''',3'''''''-hexamethyl- (6CI) (CA INDEX NAME)



L12 ANSWER 82 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1956:84606 CAPLUS
DOCUMENT NUMBER: 50:84606
ORIGINAL REFERENCE NO.: 50:15992e-f
TITLE: Safety with solvents
AUTHOR(S): Humphrey, H. B.; Morgis, Genevieve
CORPORATE SOURCE: U.S. Bur. of Mines, Washington, DC
SOURCE: Bureau of Mines Information Circular (1956), 7757, 25 pp.
CODEN: XIMIAL; ISSN: 0096-1914
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB The solvents used most widely in industry are classed in 5 groups according to their chem. and toxicological properties. The groups include petroleum distillates (aliphatic hydrocarbons), halogenated hydrocarbons, aromatic hydrocarbons, alcs., esters, ketones, ethers, etc. A 9-page chart lists the properties of flammable liquids, gases, and solids. The max. allowable concns. for solvents or threshold limit values in p.p.m. are listed for approx. 125 solvents. 14 references.
IT 70352-20-4, p-Septiphenyl (melting point of)
RN 70352-20-4 CAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Septiphenyl (9CI) (CA INDEX NAME)



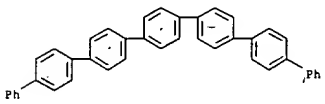
L12 ANSWER 83 OF 83 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1956:84605 CAPLUS
DOCUMENT NUMBER: 50:84605
ORIGINAL REFERENCE NO.: 50:15992b-e
TITLE: High-temperature liquids
AUTHOR(S): Florin, R. E.; Mears, T. W.
CORPORATE SOURCE: Natl. Bur. of Standards, Washington, DC
SOURCE: U.S. Atomic Energy Comm. (1955), BNL-2446, 89-102
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB In a search for heat-stable, noncorrosive liquids for heat-transfer media the following silanes (I) were prepd. by treating RxSiCl4-x with LiR, RMgX, RX + Na, or PhC.tplbond.CLi (methods A, B, C, and D, resp.). I, m.p., and method are given, resp.: Ph4Si (II), 235.degree. (b. 428.degree.), A; (PhCH2)4Si, 128.degree. (b. 467.degree.), B; (p-MeC6H4)4Si (III), 228.degree., C; (p-PhC6H4)4Si, 274.degree., A; p-MeC6H4SiPh3, 138.degree., A; (p-MeC6H4)2SiPh2, -, A; (p-MeC6H4)3SiPh, 186.degree., A; p-PhC6H4SiPh3, 157.degree., A; (p-PhC6H4)2SiPh2, 151.degree., A; (p-PhC6H4)3SiPh (IV), 157.degree., A; .alpha.-C10H7SiPh3, 172.degree., A; (.alpha.-C10H7)2SiPh2, 194.degree., A; PhCH2SiPh3 (V), 98.degree. (b. 438.degree.), B; (PhCH2)2SiPh2 (VI), 60.degree. (b. 448.degree.), B; (PhCH2)3SiPh, - (b. 458.degree.), B; (p-PhOC6H4)4Si, 225.degree., B; (PhC.tplbond.C)4Si, 198.degree., D; (PhC.tplbond.C)3SiPh (VII), 148.degree., D; (PhC.tplbond.C)2SiPh2, 80.degree., D; and PhC.tplbond.CSiPh3, 98.degree., D. Pyrolysis for 16 hrs. at 440.degree. gave coloring, and for 21 hrs. at 500.degree. decompn., resp., for: II, none, slight; III, brown, severe; IV, yellow, partial; V, yellow, nearly complete; VI, pale yellow, nearly complete; VII, pale yellow, partial. B.-p. data for 19 high-boiling aromatic Si, Ge, P, S, Se, O, and N derivs. and for several m- and p-polyphenyls are tabulated.

IT **70352-20-4**, p-Septiphenyl
(melting point of)

RN 70352-20-4 CAPLUS

CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Septiphenyl (9CI) (CA INDEX NAME)



$Ar = Ph$

$n = 5$

$R_1 \text{ or } R_2 = (Ar^1)_m - R_3$

$Ar^1 = Ph$

$R_3 = H$

$m = 1$

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L13 ANSWER 1 OF 1 USPATFULL on STN
ACCESSION NUMBER: 2001:187720 USPATFULL
TITLE: Liquid crystal color picture screen
INVENTOR(S): Nikol, Hans, Aachen, Germany, Federal Republic of
Justel, Thomas, Aachen, Germany, Federal Republic of
Van Asselt, Robert, Eindhoven, Netherlands
Broer, Dirk Jan, Geldrop, Netherlands

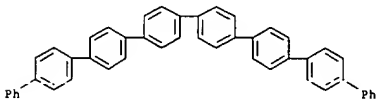
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001033348	A1	20011025
	US 6563556	B2	20030513
APPLICATION INFO.:	US 2001-803333	A1	20010309 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	DE 2000-10012326	20000314

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Corporate Patent Counsel, U.S. Philips Corporation, 580 White Plains Road, Tarrytown, NY, 10591
NUMBER OF CLAIMS: 11
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 1 Drawing Page(s)
LINE COUNT: 345
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention describes a liquid crystal color picture screen with an improved luminous efficacy and an improved viewing angle. The liquid crystal color picture screen comprises a photoluminescent layer (7) which contains a dichroically absorbing color agent and an isotropically emitting color agent. FIG. 1

IT **70352-21-5D**, p-Octiphenyl, deriv.
(dichroic absorbing dye in photoluminescence layer of liq. crystal color display to improve light efficiency and viewing angle)
RN 70352-21-5 USPATFULL
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1'''''''-Octiphenyl (9CI) (CA INDEX NAME)



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L3             STRUCTURE UPLOADED
L4          20 S L3
L5             STRUCTURE UPLOADED
L6           4 S L5
L7         179 S L5 FULL

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L8         112 S L7
L9          85 S L8 NOT PY>=2001

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L10        165 S L7 AND 1/NC

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L11        109 S L10
L12         83 S L11 NOT PY>=2001

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L13          1 S L10
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